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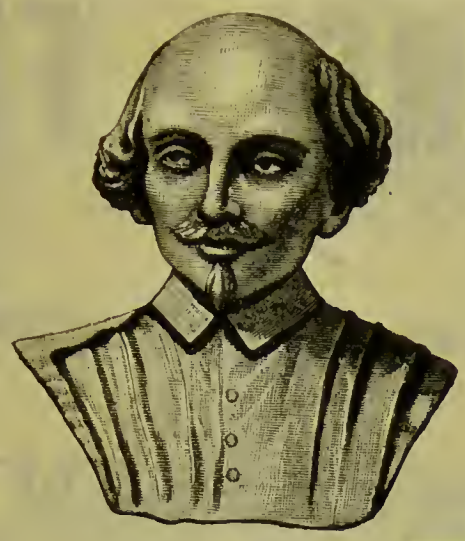

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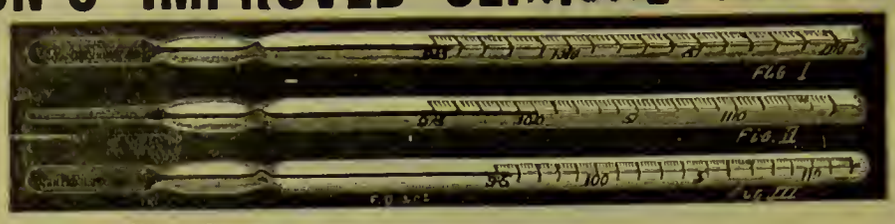

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Fig. 2.
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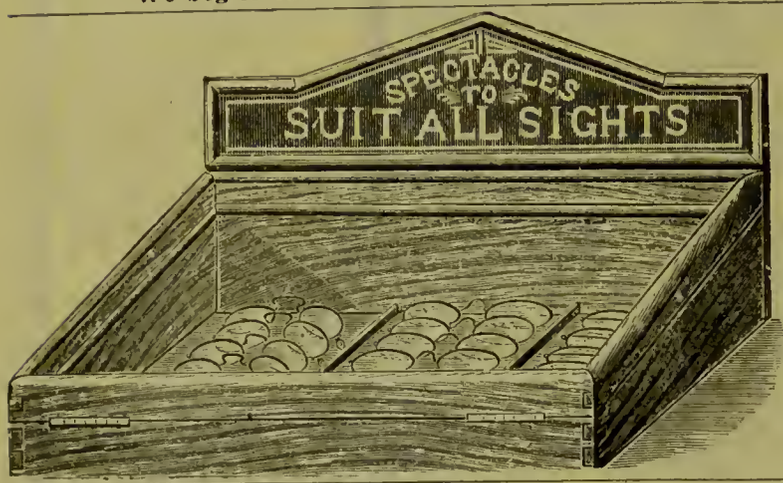

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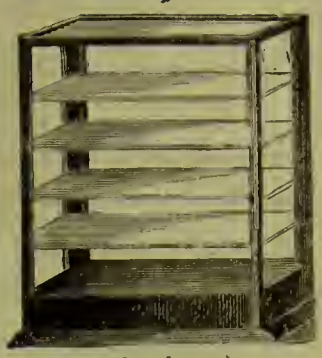

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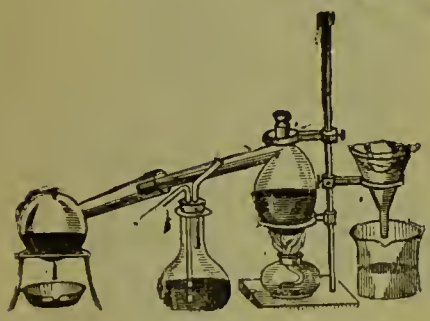

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Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of The Chemist and Druggist, 42 Cannon Street, E.C.," and the figure must be distinctly endorsed upon the envelope. Letter will then be forwarded to their proper destination. A price is counted as one word, as *e.g.*, £1 10*s.* 6*d.*

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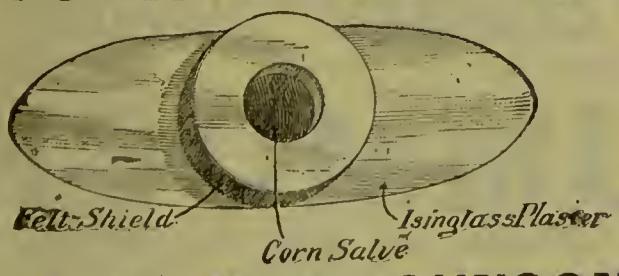

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Condal	..	14/	..	..	50	56/
Contrexeville	9/	.	50	35/	..	..
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Franz-Josef	..	11/	..	..	50	42/
Friedrichshall	13/	10/	25	25/	50	40/
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NAME.	Per Dozen Bots.	Per Dozen ½ Bots.	Original Packages. Bottles.		Original Packages. ½ Bottles.	
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Rosbach	6/	5/	50	24/	100	36/
Royat	9/		50	34/	..	..
Rubinat	15/	9/	25	30/	50	36/
St. Galmier	6/	..	50	22/	..	..
St. Marco	11/	..	50	42/	..	..
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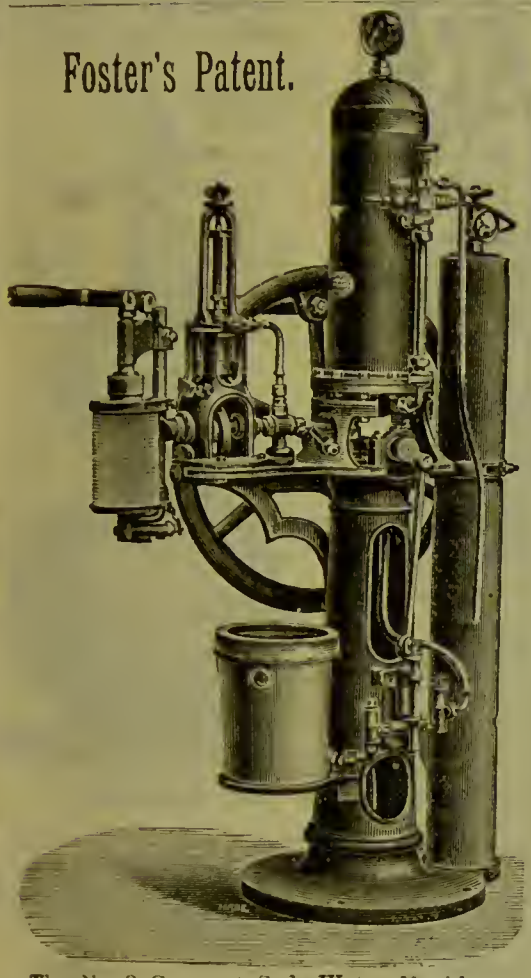

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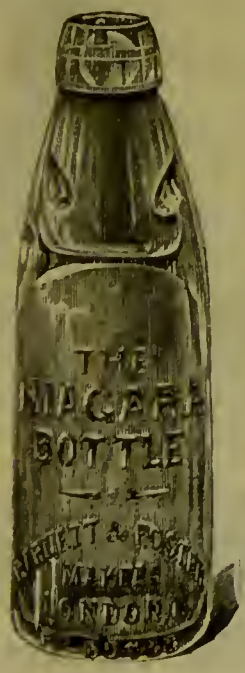

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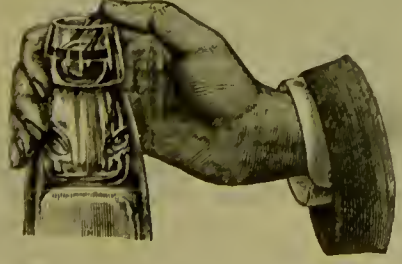

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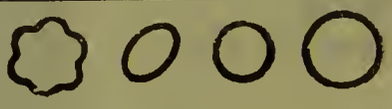

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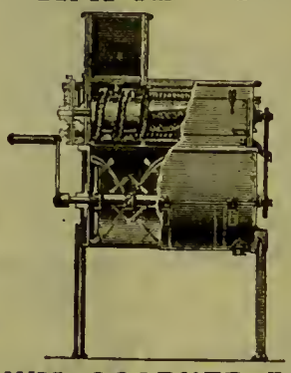

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FIG. B.

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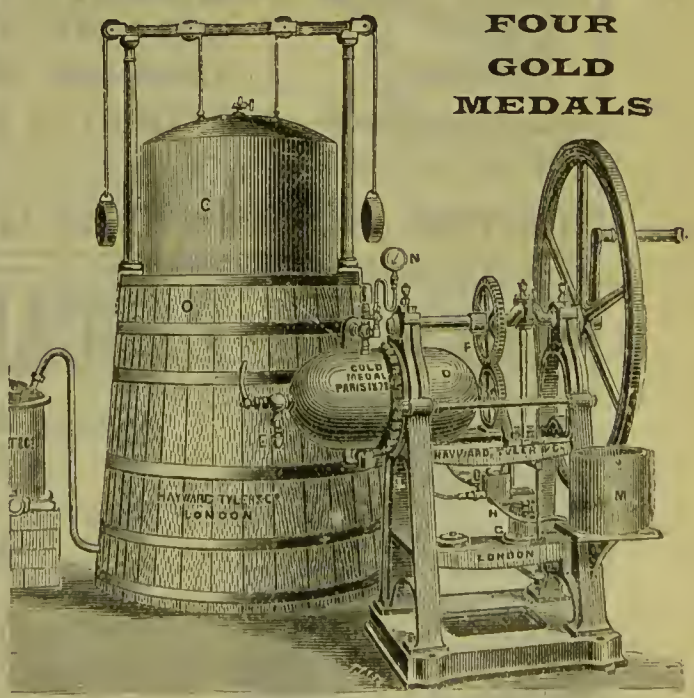

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FOR YOUR CUSTOMERS!

between the fictitious nutritive value of such invalid foods as are mainly composed of Gelatine or the extractive matters of meat, or both, as many so-called peptones, meat essences, &c., are, and the true

STRENGTH OF MEAT,

which is not yielded by its GELATINE nor by its EXTRACTIVES, but by the ALBUMINOID matters it contains, and which, by Denaeyer's process, are dissolved and converted by pepsine into a delightful and elegant preparation.

See THE LANCET, May 2nd; HOSPITAL GAZETTE, June 5th; CHEMIST AND DRUGGIST, April 16th; ANALYST, May 1st. upon Mr. Denaeyer's new method for the Analysis of Peptones, whereby the gelatine is capable of determination, whereas this body has hitherto been unavoidably included with peptone albumose by analysts.

Description will best be appreciated with the articles before you, therefore you are invited to send for a free sample of

DENAEYER'S STERILIZED PEPTONE OF MEAT (2/- per bottle, ready for use).

DENAEYER'S LIQUID PEPTONATE OF IRON (1/6 per bottle).

PULVIS FERRI PEPTONATIS (Denaeyer), 4/- per ounce.

PEPSINA PORCI (Denaeyer), 3/- per bottle, one-third of an ounce.

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DESICCATED SOUP
BROLE, a Powdered Beef Extract.
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Concentrated **BEEF** à la Mode
MEAT LOZENGES

The attention of all Chemists, Medical Men, &c., is directed to the above preparations, which are guaranteed to be made in England from Pure Beef only. Full particulars and samples sent free on application to

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PATENTED.

Contains 25 % of Allen & Hanburys' Extract of Malt.

A NOVEL CONFECTION.

Delicious Flavour. Brilliant & Attractive Appearance.

SELLS AT SIGHT.

Vide Dr. Tanner's Report, and *The Chemist and Druggist*, April 20th.

/- Bottles, 9/- per dozen; 1-lb. Bottles, 18/- per dozen; and in 2-lb. and 4-lb. Bottles, 1/4 per lb.

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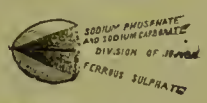
IT WILL PAY YOU to stock "Palatinoids" and "Bi-Palatinoids." They meet with great favour with the profession, and are much appreciated by the public. Children readily take them, and the worst pill-takers experience no difficulty in swallowing them.

IT WILL INTEREST YOU to see the "Bi-Palatinoid." It will interest your local medical men. It will be to your interest to introduce this novel form of administering the delicate salts of iron, such as Carbonate (Blaud's Pill), Phosphate, and Arseniate to their notice.

IT WILL RECOUP YOU for your expenditure. They are essentially dispensing articles, bear a good margin of profit, are elegant in appearance, neatly put up, and readily saleable. Will keep good in any climate, and for any length of time. Elegant, portable, palatable, and convenient.

'PALATINOID' & 'BI-PALATINOID' "PALATINOID" "BI-PALATINOID" (FERROUS CARBONATE) "BI-PALATINOID" (FERROUS PHOSPHATE)



Before immersion in water. After three minutes' immersion in water at normal temperature of stomach.

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DUNCAN, FLOCKHART & CO., EDINBURGH.

CASCARA SAGRADA CAPSULES.

Each Capsule equal to ¼, ½, or 1 teaspoonful of Fluid Extract of Cascara Sagrada. They can also be had in combination with ½ or 1 grain of EUONYMIN. In Boxes at 1/6 and 2/6; 14/- and 24/- per dozen. (Also in Bulk.)

BLAUD'S PILL CAPSULES.

In 3 sizes, equivalent respectively to 1, 2, or 3 Blaud's Pills.

These Capsules differ from all others, and have advantages which no others possess. They are made from Pure Unoxidised Carbonate of Iron by a special process. They are so prepared that, while they retain indefinitely the full efficacy of fresh Blaud's Pills, they have no tendency to become hard and insoluble by keeping, as the pills often do. They are small in size. Owing to the special process adopted by D., F. & Co., the 3-pill Capsule is hardly larger than a single Blaud's Pill. They are soft and flexible, and much more easily swallowed than pills.
They can be had in combination with Arsenic, Nux Vomica, &c. In Boxes at 1/-, 1/9, and 2/6; 8/-, 15/-, and 22/- per dozen. (Also in Bulk.)

EASTON'S SYRUP CAPSULES.

Each Capsule equivalent to 20, 30, or 60 minims of Easton's Syrup.
In Boxes at 1/-, 1/9, and 2/6; 10/-, 17/-, and 24/- per dozen. (Also in Bulk.)

SYRUP. HYPOPHOS. COMP. (Duncan's.)

Some time since we had several samples of well-known SYRUP. HYPOPHOS. COMP. analysed by Mr. D. B. Dott, F.R.S.E., F.I.C., Ph.C., and in no one case did he find so large a proportion of the active constituents as is found in our preparation by a precisely similar analysis—which analysis is an absolute proof that the proportions of the different ingredients which we state are in our Syrup ARE ACTUALLY PRESENT. We, therefore, submit that from the use of our Syrup the best results may be confidently anticipated.

In proof of our statements we subjoin the report of Analysis referred to.

NOTE.—Our Syrup will darken in colour by lengthened keeping; and so must every Syrup which contains a similar proportion of FERROUS Hypophosphite.

"*Analysis of SYRUP. HYPOPHOS. COMP. (grains per drachm).*"

	Duncan's	No. 1	No. 2	No. 3	No. 4
Hypophosphite of Quinine ..	·25	·14	·11	·69	·12
,, ,, Iron	·77	·72	·10	·28	·15
,, ,, Manganese	·27	·22	·00	·16	·08
,, ,, Calcium....	1·04	·00	·83	·01	·15
,, ,, Potassium..	1·00	·68	1·48	·24	·29
,, ,, Sodium	1·53	1·45	1·54	·29	·29
The quantity of STRYCHNINE present was not determined. Our Syrup contains $\frac{1}{100}$ grain in each fluid drachm.					

WHOLESALE FROM WM. EDWARDS & SON, 157 QUEEN VICTORIA STREET, LONDON, E.C.

Telegrams: "Troches Manchester."

BLYTON, ASTLEY & CO.

Pharmaceutical Chemists,

EAGLE LABORATORIES,

MANCHESTER,

Telegrams: "Troches Manchester."

Manufacture for the Home and Foreign Markets goods of standard quality, as under—

PHARMACEUTICAL CONFECTIONERY.—Comprising Medicated Lozenges of the British, Throat Hospital, and all London Hospital Pharmacopœias, general and proprietary formulæ. Medicated Jujubes and Pastilles, moulded or cut, plain or crystallised. Worm Cakes for children, chocolate, sugar, or ginger-bread. Sulphur Tablets and Lozenges, plain or compound. Cachous, in a great variety of flavours and shapes, ordinary, diamond, oval, and spherical. **LIQUORICE PELLETS, MADE FROM HIGHLY-REFINED JUICE, AN EXCEEDINGLY PURE ARTICLE.** Boiled Sweets, special quality for Chemists, manufactured chiefly from real fruit flavours. Complete list on application.

GRANULAR EFFERVESCING PREPARATIONS.—Comprising the ordinary qualities of Mag. Cit. Gran., and all the medicated varieties, prepared from pure Bicarbonate of Soda and English refined acids. Complete List on application.

SOLUBLE COATED PILLS.—Pearl or Gelatine Coated; the drugs used are genuine, and of the best quality, whilst the excipients are selected to preserve the properties of the ingredients and facilitat the solubility of the pills. Special quotations for Aperient, Antibilious, Cough, Blaud's, and the "Littl Pill" series. Pills rolled, cut, and coated to order from private formulæ. Complete list, enlarged and revised, on application.

EXTRACT OF MALT.—We invite comparison, both in the matter of flavour, appearance, and valu as a digestive and therapeutic agent. Its special qualities are due to the amount of unaltered diastase i contains, and its freedom from alcoholic compounds and carbonic acid. Apart from its highly nutritiou qualities, it is an invaluable adjunct to all kinds of farinaceous foods, as puddings, porridge, arrowroot, &c &c. It keeps indefinitely in any climate, and is packed in one and two shilling bottles. We also pack it i the same style combined with the finest Cod Liver Oil.

NEW ILLUSTRATED LISTS MAILED FREE TO REGISTERE CHEMISTS UPON RECEIPT OF BUSINESS CARD.

PLEASE CORRESPOND WITH US: WE WANT YOUR BUSINES

FRIENDLY TALKS with the TRADE.

THE DIGESTIVE FERMENTS.—Diastase is an unorganised ferment; insomuch that it is known to contain Nitrogen, it is doubtful if it has been obtained pure.

THE KEPLER MALT EXTRACT is especially rich in this ferment.

KEPLER MALT EXTRACT contains all the nutrient elements of pure barley, such as phosphates, albuminoids, &c., in conjunction with that peculiarly active substance, *diastase*, which is concerned in converting the starch of farinaceous products into the more assimilable products. This diastase is a most important principle of the Malt, being of special service in errors of nutrition, accompanied by digestive derangements. It does not tax digestion, but aids it in its processes, and furnishes warmth-giving, tissue-forming, and force-producing elements.

With reference to the Kepler Extract of Malt, there is, no doubt, a big future before this preparation as a vehicle for taking nauseous medicines. The Archives of Pedriatics, for December, 1890, maintain: "With regard to the Kepler Solution of Cod-Liver Oil with Extract of Malt, that the disagreeable taste of Cod-Liver Oil may be made to disappear by mixing the Oil with Extract of Malt which has been prepared in vacuo. They also affirm that the Kepler Extract of Malt placed in contact with Cod-Liver Oil dissolves it. This solution (Kepler) is perfectly clear and transparent, and shows no fat-globules under the microscope. In this manner, strange as it may seem, a true solution is produced. To separate the Oil it is only necessary to place a drop of water on the surface, when immediately small globules of oil appear. This emulsion is more perfect than that of butter in milk, and only Extracts of Malt which are rich in diastase possess this property. Invalids, and especially children, enjoy the solution, and, far from disturbing digestion, as the raw Oil too often does, the Malt improves it."

Steapsin emulsifies fat in the presence of bile, so that the whole of the emulsified fat is absorbed by the lacteals of the intestines during its passage through the alimentary canal. The remaining Enzyme of the Pancreatin acts upon proteids in exactly the same manner as Pepsin, the Pancreatic ferment being active only in an alkaline medium, while the Pepsin acts only in an acid medium. Probably the Fairchild Zymine was the first pure production of the Pancreatic Enzymes. Zymine is free from any admixture with starch, milk-sugar, or other diluent material, and it is especially active in digesting carbo-hydrates and proteids Zymine (Fairchild) is supplied as powder in quarter-ounce and one-ounce bottles, each bottle being fitted with a depression in the cork to hold sufficient of the powder to digest a pint of milk or beef-tea, according to the directions given on each label. The Zymine Peptonising Powders each contain 5 grains of Zymine with 15 grains of Bicarbonate of Soda in small glass corked tubes, each tube containing sufficient of the Zymine and alkali to digest a pint of milk or beef-tea. These are very convenient for use in the sick-room, as they undoubtedly obviate the necessity for calculating the quantity to be used. With each packet of powders a little brochure is supplied, containing directions for the preparation of various kinds of food suitable for invalids and infants. The Zymine is also supplied in the form of "Tabloids," each "Tabloid" containing 3 grains of Zymine. Also in compound Zymine "Tabloids," each containing 2 grains of Zymine, Subnitrate of Bismuth 3 grains, Ipecacuanha $\frac{1}{4}$ gr. These are sugar-coated, and are very easily swallowed with a draught of water. Zymine is employed with benefit in the treatment of intestinal dyspepsia, indicated by pain and depression in the lower part of the stomach about two hours after taking food. Chemists will find that a large demand for these goods can be created entirely as a separate line in their business.

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.

TRADE "VASELINE." MARK.
REGISTERED.

The Wholesale Houses can now supply

ONE-PENNY TINS.
TWO-PENNY TINS.
THREE-PENNY TINS.

"BLUE SEAL"
"VASELINE SOAP,"
1-LB. TINS.

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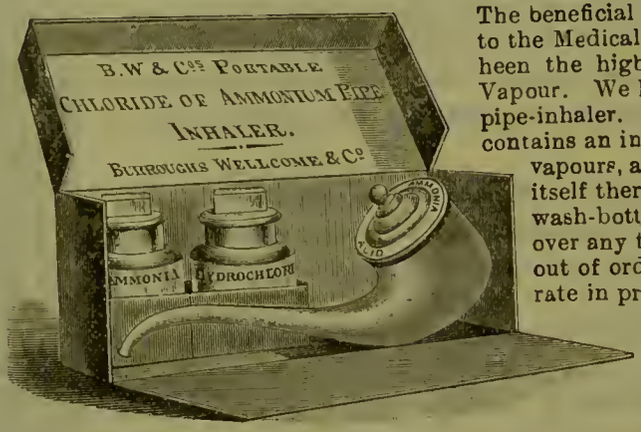
Hooker's Chloride-of-Ammonium Inhaler.



The beneficial effect of inhalations of Ammonium Chloride have been long known to the Medical Profession, and the only objection to its more extensive use has been the high cost of instruments for the inhalation of Ammonium-Chloride Vapour. We have, however, at the instance of Dr. Hooker, introduced a portable pipe-inhaler. It is composed throughout of earthenware. The bowl of the pipe contains an inner vessel, perforated at the base, to promote combination of the vapours, and is divided down the middle by a septum. In the base of the bowl itself there is placed a sponge, which, when saturated with water, acts as a wash-bottle to the fumes. This Inhaler possesses the following advantages over any temporary apparatus:—It is extremely portable, and not liable to get out of order easily. It may be thoroughly cleansed by washing, and is moderate in price. This Inhaler may be employed by patients in any position, or while walking, sitting, or reclining. The Inhaler, together with two stoppered bottles, containing Hydrochloric Acid and Solution of Ammonium for use with the instrument is supplied to the Trade at 5s.

Burroughs, Wellcome & Co., Snow Hill Buildings, London, E.C.

ISO-BUTYL NITRIS.

Also GLASS CAPSULES of ISO-BUTYL NITRITE.
For use in Angina Pectoris, Asthma, and similar complaints, by Inhalation.

Liquor Cascaræ Suavis.
(REGISTERED.)
An agreeable Aromatic Fluid Extract of *Cascara Sagrada*, possessing the full laxative and aperient properties of the bark.

Sol. Æthyl Nitritis.
Containing 3 per cent. of Pure Nitrite of Ethyl, in Absolute Alcohol and Glycerine.
See paper by Professor Leech on "The Comparative Effects of Spiritus Ætheris Nitrosi and Solution of Ethyl Nitrite." *Pharmaceutical Journal*, December 22, 1888.

Spiritus Ætheris Nitrosi.
Guaranteed to contain the proportion of Nitrous Ether directed by the British Pharmacopœia.

Æther Nitrosus and Sol. Ætheris Nitrosi.
Respectively 8 and 4 times the strength of the Spirit.

JAMES WOOLLEY, SONS & CO.
Manufacturing Pharmaceutical Chemists,
MANCHESTER.
Laboratories and Drug Mills, KNOWSLEY STREET, CHEETHAM.
QUOTATIONS AND PRICE LIST FORWARDED ON APPLICATION.

THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

PRINCIPAL OFFICE, 42 CANNON STREET, LONDON, E.C.

BRANCH OFFICES:

MELBOURNE AND SYDNEY, AUSTRALASIA.

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Summary.

IN our News section are printed the regulations for the Irish assistants' examination.

THE policy of pharmacy for the pharmacist only in Germany is leading to a proposal to have it all for the State.

EMERITUS PROFESSOR REDWOOD died at Boverton last Saturday. We give a recent portrait of the Professor, and a sketch of his career.

THE Pharmaceutical Society of Ireland have still a large amount of work on hand regarding the registration of druggists, which will be seen from the concluding report of the Council Meeting published to-day.

PROFESSOR ARMSTRONG has concluded his course of lectures on "Fermentation," dealing chiefly with the bacterial branch on Wednesday, and advancing some speculations in regard to the causation and prevention of zymotic diseases.

MR. G. W. SARGENT has pleaded guilty to libelling Mr. Bottle, Vice-President of the Pharmaceutical Society, has apologised, and has entered into his own recognisances to come up for judgment when called upon. Our Legal reports contain another libel action, the outcome of the abortive proceedings against Mr. Denton, of Salford. We also give a report on a case regarding the return of syphons and soda-water bottles.

UNDER "Burlington House Echoes" we this week give notes of the papers read before the Chemical Society, which included two papers on the alkaloids of Aconite Napellus root, in one of which the constitution of aconitine was partly proved, and a synthesis of that alkaloid, with aconine as the starting-point was reported. Papers on explosives and the acid reaction of drawing-paper, read before the Society of Chemical Industry, are added.

Next Week.

Notices for this section must be received by the Editor not later than Wednesday. Secretaries are recommended to adopt the following style of announcement, including the hour and place of meeting.

TUESDAY, March 15.—*Royal Institution of Great Britain*, at 3 P.M. Professor Victor Horsley on "The Brain."

WEDNESDAY, March 16.—*Sheffield Chemical and Pharmaceutical Society.* Discussion on "The New By-laws of the Pharmaceutical Society," opened by Mr. W. Ward.

WEDNESDAY, March 16.—*Western Chemists' Association.* Smoking concert at The Westbourne Restaurant, 1 Craven Road, W., at 9 P.M.

WEDNESDAY, March 16.—*Royal Microscopical Society*, 20 Hanover Square, W., at 8. Mr. E. M. Nelson on "Virtual Images and Initial Magnifying Power." Mr. H. L. Breroot on "Observations on the Brownian Movement." Dr. A. C. Mercer, lantern demonstration on "Photomicrographs and Photomicrographic Apparatus."

THURSDAY, March 17.—*Chemists' Assistants' Association*, 103 Great Russell Street, W.C., at 9 P.M. Mr. R. H. Davies, F.I.C., F.C.S., of the Apothecaries' Hall, will communicate some laboratory notes.

THURSDAY, March 17.—*Brighton Association of Pharmacy*, at 8 45 P.M. Short papers.

THURSDAY, March 17.—*Dundee Chemists' Assistants' and Apprentices' Association*, at 9 15 P.M. Mr. D. M. Small, L.D.S., on "First Aids in Dentistry."

THURSDAY, March 17.—*Chemical Society*, at 8 P.M. Professor Dunstan on "The Conditions which Determine Combination between the Cyanides of Zinc and Mercury and the Composition and Properties of the Resulting Double Salt." Professor Thorpe, F.R.S., on "A Lecture Experiment to Illustrate the Phenomenon of Coal-dust Explosions." Drs. Armstrong and Kipping on "The Ketone Formed by the Action of Dehydrating Agents on Camphor." Mr. F. Pullinger, B.A., on "Platinum Tetra-Chloride."

THURSDAY, March 17.—*Royal Institution of Great Britain*, at 3 P.M. Professor W. P. Ker on "The Progress of Romance in the Middle Ages."

FRIDAY, March 18.—*Royal Institution of Great Britain*, at 9 P.M. George du Maurier, Esq., on "Modern Satire in Black and White."

SATURDAY, March 19.—*Royal Institution of Great Britain*, at 3 P.M. Lord Rayleigh on "Matter: at Rest and in Motion."

OUR ISSUE TO SHIPPERS.

NEXT week the issue of THE CHEMIST AND DRUGGIST will be one specially addressed to the shippers of the United Kingdom who are engaged in the shipment of drugs, chemicals, patent medicines, perfumery, aërated waters, bottles, and druggists' sundries of all kinds. The circulation to these important buyers will be in addition to our usual week-by-week circulation to subscribers at home and abroad. This Shippers' issue is one which is filed in the export offices of the United Kingdom, so that it provides an exceptional opportunity for the houses of the trade bringing the nature of their goods directly under their notice. There is every reason, therefore, why announcements in the issue should be thoroughly remunerative to advertisers, and none should miss this opportunity. Please note that the Publisher cannot receive copy or orders for this issue later than Wednesday, March 16.

DR. J. A. WYETH has obtained good results in gonorrhœa by the administration of oil of wintergreen in doses of six drops three times a day.

English News

Carbolic Poisoning.

The inquiry into the death of the three-months-old baby of Mr. R. M. Wright, manager of a Sunderland glassworks, was resumed on March 3. The medical evidence was to the effect that the child died from the results of carbolic acid having been administered to it. The nurse attending the child and the servant of the house were called, but no evidence was forthcoming to point out who put the acid on the child's face. The jury returned an open verdict, and suggested that such a dangerous poison should not have been kept before servants.

Sudden Death of a Chemist.

Early on Monday morning of last week, Mr. John Dunn, chemist, of Commerce Road, Wood Green, died suddenly. Dr Jones, of High Street, was called in, and pronounced life extinct. It was supposed that deceased had been poisoned, but at the inquest held on March 3 the medical evidence showed that this was not so.

Suicide of a Chemist's Assistant.

An inquest was held at the Town Hall, Folkestone, on March 4, touching the death of a young man named Thomas William Collette, aged 29 years, assistant in the employ of Messrs. Bishop & Co., chemists, Sandgate Road. Collette had been somewhat despondent of late, regretting the time he had spent in the army when he was quartered in India. As a rule he was a steady young fellow, but on the previous Wednesday night he arrived home about twelve the worse for drink. As he complained of being unwell next morning Mr. Pitt, the manager, took him a pick-me-up. Later in the day the manager again went to his bedroom, and there found him lying dead in bed, an examination of the room showing that the deceased had committed suicide by taking prussic acid, the bottle which had contained it lying by his side. A number of letters, done up in packets, were found in Collette's room. The inscription on the outside of one was, "Chap. I.—the record of an uninteresting life." Mr. N. G. Tunge-Bateman stated that he had made a post-mortem examination, and he found that death had arisen from a dose of prussic acid. The jury returned a verdict of suicide.

Man as Beverage.

Dr. Thresh has given the Essex people something to think about. He finds that the graveyards of the district are seriously overcrowded, and strongly suspects that "the excessive amount of nitrates found in certain well-waters is derived from the oxidation of human remains."

That Lizard Story.

Dr. James Mudge, of Marazion, who was named as the authority for the recent lizard story, is very emphatic about the matter. He writes, "A woman brought a female smooth-bodied newt into my surgery about fourteen days ago, which she said came out of her stomach alive. I don't believe it."

A Singular Charge.

At the Halifax Police Court on Wednesday, Sarah Ann Cowgill, described as a wholesale chemist and druggist, Sowerby Bridge, charged her son, Abraham Cowgill, with having on February 15 entered the premises belonging to her and carried off the cash-book and day-books belonging to her business. Mr. Cadman, on behalf of the prosecutrix, made a long statement with the object of showing that the prosecutrix was sole proprietress of the business, which formerly belonged to Brian Booth Cowgill, as the business was established by her eldest son, who died in 1885, leaving Mrs. Cowgill sole legatee. Evidence in support of the charge was called, but the Bench dismissed the case.

Chemist's Shop Destroyed by Fire.

On Saturday, March 5, a fire broke out on the premises of Mr James Furniss (described as a chemist and druggist, but whose name is not on the register), South Street, Sheffield, has narrowly escaped a terrible death by fire. His premises are situated at the junction of South Street and Gilbert Street. In the cellars was stored a large quantity of petroleum and other oils, five tons of flour of sulphur, resin, and other inflammable material. The shop was well stored with drugs, and the floor above was used partly as living-rooms and partly as store-rooms. In the garrets was an immense quantity of matches, variously estimated at from one to three tons in weight. At noon on Saturday Mr. Furniss went into the cellar to draw off some paraffin, and accidentally knocked over the lighted lamp he had with him. In an instant, as it seemed to him, the cellar was in a blaze, and the wooden steps by which he had descended were enveloped in the flames. He made an attempt to escape by them, but was driven back by the volume of flame rushing up them. He then went to a little grating in Gilbert Street, which was fortunately unfastened, and his cries for help were heard by some men standing near. They with great difficulty dragged him up through the small opening, scratching him much in the operation. Wet sand and earth were thrown into the cellar in hope of checking the progress of the fire, but without success. The flames broke through the flooring into the shop, spread along the passage into the living-room, and set fire to the staircase. Mrs. Furniss was ill in bed, and the servant was upstairs. They were alarmed by the smoke and noise, and, finding retreat cut off, they went to one of the bedroom-windows and stepped on to the cornice over the shop, whence they were rescued by means of a ladder. The stench from the oils, sulphur, and chemicals was horrible, and made it difficult to approach the place. The fire-brigade directed their efforts to preventing the flames from spreading further, and they were successful. The shop, with its thousands of bottles, was gutted; the living-room and the cellar also show the full effects of the fire. Mr. Furniss estimates his loss at 1,200*l.*, and he is only insured for about a quarter of that sum. The property, which belongs to Mrs. H. Hurst, of Sharrow, is insured.

Worth 500*l.*—in Shares.

At the Westminster County Court, on Tuesday, Messrs. Hooper & Co., the well-known aërated-water manufacturers, had a case against a chemist, named Potter, for the recovery of a debt. The defendant stated, in answer to questions, that his business was turned into a limited company, and he was the manager, at a salary of 150*l.* per annum, but he did not always get that sum. He only received 500*l* in shares for the purchase of the business, but those shares were worthless. He had a number of judgments against him, including one of 70*l.* He could pay 10*s* a month. His furniture had been sold up. His Honour made an order for the payment of 10*s.* a month.

They Danced at Dartford.

The employés of Messrs. Burroughs, Wellcome & Co., wholesale chemists, Phœnix Works, Dartford, held an enjoyable social reunion last week at the Dartford Conservative Hall, about 200 persons being present. Dancing was indulged in, and a capital band discoursed selections of music.

Right in Theory, Wrong in Practice.

A man named William Burrett, aged 39, has been, at West Ham, fined 20*s.* for stealing eucalyptus oil from a can at the Victoria Docks. He appeared to have drawn some of the oil into a small phial from a 5-gallon can, and when arrested said he had heard that eucalyptus oil was good for rheumatism, and thought he would take a little.

Horse in a Chemist's Window.

On Thursday evening of last week, a horse attached to a Co-operative Society's dray ran into the window of Mr. Henry Hyett, chemist and druggist, of 6 Bailgate, Lincoln, and did damage amounting to 40*l.* The property was not insured. The horse was badly injured.

A Fatal Chemical Experiment.

William Henry Lewin, of 86 Portland Road, Nottingham died on Wednesday of last week from the effects of phosphorus which he had inhaled, and taken in solution while experimenting with it on the previous Thursday. At the inquest the mother of the deceased said that on the day mentioned her son was trying to ignite phosphorus by means of electricity. The next day he complained of feeling ill, and

on Sunday night he told her he had taken a solution of phosphorus, water, and sugar, to try his strength against the phosphorus. He also said he had inhaled the fumes of the phosphorus when it became ignited. Drs. Mutch and McKenzie were called in on Monday, but the deceased succumbed in spite of the medical attention. Dr. Mutch deposed that Lewin was dying from the effects of phosphorus when he was called in, and to that he attributed death. A verdict of death from misadventure was returned.

"Brum" Chemists, Note This.

The Midland Counties Chemists' Association were to have had a musical and social evening on Tuesday next, but it has been postponed to Thursday, March 24.

Practical Appreciation.

At a meeting of the Bethnal Green Board of Guardians last week, Mr. A. P. Barnard moved that Mr. John Suttar, the dispenser, should have an increase of 10*l.* per annum, Mr. Abbott seconded. Mr. Milbourn and Mr. Fordree spoke in support, eulogising the way in which the dispenser carried out his duties. The motion was agreed to, also that the Local Government Board should be informed of the fact.

The Opium Traffic in India.

In the House of Commons on Monday, Mr. Samuel Smith asked the Under Secretary of State for India, whether the attention of the Government had been called to the declaration of opinion by 5,000 medical men in the United Kingdom to the effect that the habit of opium-smoking or of opium-eating was morally and physically debasing, and that the drug opium ought, in India as in England, to be classed and sold as a poison, and be purchasable from chemists only. And whether they would call the attention of the Government of India to this important declaration. The Hon. G Curzon: The Secretary of State has seen statements that such a declaration is being circulated. The attention of the Government of India will be drawn to the matter by the hon. member's questions, which will be forwarded to India in the ordinary course.

Claim for Damage to Syphons.

In the Westminster County Court, last Thursday, the case of Myers *v.* The London Road Car Company came on for trial before his Honour Judge Bayley. The plaintiff, a syphon-manufacturer, sought to recover compensation for damage sustained, owing to the alleged negligence of the defendants' driver, in a collision which occurred between his loaded van and the defendants' omnibus, in Sloane Street, on December 15. After hearing evidence, the Judge said he was not satisfied that there had been any undue negligence, and gave judgment for the defendants, with costs.

The Sale of Carbolic Acid.

On Tuesday afternoon Mr. G. P. Wyatt, the deputy coroner for East Surrey, held an inquest at 118 Pomeroy Street, Deptford, on the body of Mary Jane Bird, a married woman, who committed suicide by taking carbolic acid at the above address while in a depressed condition. After hearing the evidence of relatives and of the doctor, the Jury found that deceased committed suicide whilst mentally deranged, and expressed a hope that before long more stringent methods would be adopted in reference to the sale of poisons.

The Annual Dinner of the Chemists' Assistants' Association.

The fourteenth annual dinner of the Chemists' Assistants' Association was held at the Holborn Restaurant on March 3. Mr. S R. Atkins was in the chair, and amongst those present were Mr. Ernest Hart and Dr. W. M. Ord. The toast of "The Medical Profession" was proposed, in a lengthy speech, by Mr. A. H. Mason, who thought that the time had now almost come when the medical men should leave dispensing to pharmacists only—a sentiment which neither Mr. Ernest Hart nor Dr. Ord, who replied for the profession, found himself able to reciprocate. Mr. Atkins proposed the toast of "The Chemists' Assistants' Association" (which was responded to by Mr. W. Lloyd Williams, the President of the Association); and Mr. J. C. Umney, that of "The Pharmaceutical Society," to which Mr. Martindale replied. "The Chairman and Visitors," proposed by Mr. W. A. Morris, and replied to by Mr. Atkins, brought the toast-list to a close. A fair *répertoire* of songs and music relieved the solidity of the speech-making, and altogether the evening was very successful.

Contract for Drugs.

The guardians of the poor of the parish of Lambeth have given notice that they are prepared to receive tenders for the supply of drugs and disinfectants and mineral waters for use in their workhouse and infirmary for the ensuing six months. Forms of tender, and particulars as to the probable consumption of such goods, may be obtained at the office of the guardians any day between 10 and 5.

Hop-bitters on Sale.

The goodwill, trade-marks, and the whole business of the Hop-bitters Company were offered for sale at the Auction Mart on Wednesday, by Messrs. Edwin Fox & Bousfield, by order of the debenture-holders. The purchaser was to have the formula, guaranteed by the present manager of the concern, the trade-marks registered in twelve countries, the furniture, advertising material, stationery, and the lease of the premises; the stock in hand and material were to be taken at valuation. Mr. Edwin Fox was the auctioneer, and the company present included several well-known patent-medicine dealers. Mr. Fox narrated briefly the history of the enterprise. It had been a very successful business, he said, in America from 1872. It was established in this country in 1881, and profits up to 15,000*l.* a year had been made from it. In 1886 it was sold to a company for 95,000*l* Since then it had been badly managed and the profits had decreased; but there was still a fair sale, and under proper management the old profits might be made again. What should he say for the concern? A year's profits? Half a year's? Anything you like, gentlemen, to start with. A little chaff was attempted from the back of the room—perhaps from a shareholder; perhaps from a consumer. In either case the bitterness was comprehensible. But it had no success. After the usual interval of coyness 1,000*l.* was bid. This was followed immediately by 1,500*l.* The first bidder responded with 2 000*l.*, and then by 100*l.* at a time the offer rose to 2,600*l.* The "room" refused to go beyond this figure, and the auctioneer sadly named 3,000*l.* as the reserve amount, and the tragedy was over.

Sale of Poisons.

An inquest was held at Dawlish, on Monday, on the body of Helen Miller (24) a domestic servant in the employ of Mr. W F. Banks, the manager of the Devon and Dawlish Bank in that town. It appeared that the deceased, who had been in the employ of Mr. Banks for four years, had admitted that there was something wrong in the housekeeping accounts, and that her master had forgiven her. Mr George John Cutcliffe, chemist, stated that he sold deceased 4 oz. of laudanum on the previous Wednesday evening. She informed him that she suffered from neuralgia, and that that was the only thing that would give her relief. The medicine was sold for outward application only. The deceased appeared to have taken some on Thursday evening when she went to bed. The following morning she complained of headache, and afterwards admitted she had taken something. She was attended by Mr. Webb, surgeon, but died on Saturday evening from collapse, the result, according to medical evidence, of narcotic poisoning. A 4-oz. green bottle produced at the inquest contained about 130 grains of laudanum. The Coroner, in summing up the case, remarked that he thought the Legislature should take more precaution as to the regulation for the sale of poisons. The jury, in returning a verdict of suicide whilst temporarily insane, endorsed the remarks of the Coroner.

On the Move.

Mr. Thomas Kerfoot, medicated-lozenge manufacturer, Manchester, finds himself under the pleasant necessity of having to make arrangements for an increasing business. He and his workpeople, who number over a hundred in all, are at present "cribbed, cabined, and confined" in two buildings—one of them in Berry Street, on one side of London Road, and the other in Hague Street, on the other side of the same thoroughfare. These buildings were not originally con

structed for such a purpose as that to which they are now put, and, rather than spend a great deal of money in an effort—which might not have proved quite successful—to adapt them to present-day requirements, it was some time ago determined to secure new premises. A seven-storey building in Chester Street, occupied once upon a time as a sugar-refinery, was obtained on long lease, and for the past six or seven months the British workman has been engaged in overhauling the building from the basement to the roof and fitting it up after the most approved style for the making of lozenges. The machinery includes a very large new boiler and engine. Everything being now nearly ready, Mr. Kerfoot hopes to migrate in a few days from the banks of the sylvan Medlock to his new place in Chester Street.

"Collecting" Bottles.

At North London Police Court on Saturday, before Mr. Haden Corser, Richard Chapman, a gaunt individual, described as a bottle-collector, was charged with stealing eleven drug-bottles from the dispensary of the Islington Workhouse. Mr. D. A. Romain, who prosecuted, called Mr. Henry Boyd Donnell, the dispenser, who said the prisoner mixed with people who came for out-relief, and thus got through two passages to the place where the bottles were kept. The prisoner, who was found dealing with the bottles, now pleaded drunkenness as an excuse; but Mr. Haden Corser told him he must have been particularly 'cute to find his way to the place where the bottles were stored. Twenty-one days' hard labour.

The Chemist and the Solicitor.

In the Westminster County Court on Wednesday, the case of Boutell *v.* Cavell came before Judge Bayley. The claim was for 2*l.* 0*s.* 3*d.* for drugs supplied to the defendant, a solicitor, who set up a counter-claim for professional services. The claim was admitted, but it was stated for the defendant, who was not present, that he had acted professionally for Mr. Boutell, but that gentleman denied having given him any instructions to, and he had promised to pay, and a few days ago he offered him 30*s.* to settle it. His Honour gave judgment for the plaintiff on the claim and counter-claim, with costs.

A Counterfeit-coin Customer.

At the Central Criminal Court on Monday, John Marney, a printer, was sentenced to three years' penal servitude on a charge of uttering counterfeit coin to William Myers, chemist, Greek Street, Soho.

The Widow's Medical Specific.

Mrs. Mary Ann Hillock, a widow, has a business in Berners Street, where she sells some patent ear remedies and instruments. At the Marlborough Street Police Court, on Tuesday, she brought a charge against Elgin Laws, 30, described as a medical practitioner and an advertisement agent, of Black Horse Road, Walthamstow; Horace Emerson, 37, a solicitor's clerk, of Disraeli Road, Putney, stated to have been a solicitor who had been struck off the rolls; and Everard Louisa Venable, 23, a nurse, of Crescent Street, Offord Road, Barnsbury, for conspiring together to obtain from her certain instruments, recipes, books, and securities, which she valued at some hundreds of pounds, by fraud. She said Laws called upon her first about advertising. He called frequently, and ultimately induced her to agree to accept him as her partner in the business. He got possession of her keys, and getting her out of doors, suddenly stopped, and, telling her that the keys were in his pocket, exclaimed, "I have locked the place up, and the business is mine. Your place is outside." She was for a moment dumbfounded, but, on recovering herself, she appealed to him not to treat her in that way. He replied that she could choose between being turned into the street and becoming bankrupt, and entering his service as manager at a salary of 2*l.* 10*s* a week. Under the belief that no agreement made on Sunday would be binding, she accepted the latter alternative, hoping that it would give her an opportunity of gaining possession of her recipes. On going to her place of business the next morning, however, she found it closed. The other prisoners are charged with having assisted in the scheme. All were remanded.

Irish News.

Tenders for Medicines Wanted.

The following Boards of Guardians advertise for tenders for the supply of medicines and surgical instruments, &c., which will be decided on the appended dates:—Ballinhoro, March 14; Borrisokane, March 14; Clogheen, March 15; Clonce, March 17; Cootchill, March 18; Delvin, March 18; Dunshaughlin, March 15; Naas, March 16; Oldcastle, March 21; Roscrea, March 17; Tipperary, March 15; and Tulla, March 15.

The Assistants' Examination.

The first examination for qualification of assistants to pharmaceutical chemists will be held on the second Wednesday in April. The following are the regulations:—

I.—Candidates presenting themselves for this examination must have passed the Preliminary examination of the Society, or such other examination as is expected as equivalent thereto, and have lodged the fee of two guineas to the credit of the Society.

II.—Candidates for examination must give notice, at least fourteen days before the stated meeting for examination, of their desire to be examined, according to the following formula, with a receipt of having lodged the fee required in the Bank of Ireland to the credit of the Society.

I.....desire to be examined for the qualification of assistant to pharmaceutical chemist.

III.—The fee to be paid by each candidate on making application for examination shall be one guinea, which includes examination and registration fees. A rejected candidate may present himself for re-examination after a lapse of six months, on paying the examiner's fee, which shall be half-a-guinea.

IV.—Candidates must have been engaged at practical pharmacy for at least four years, and must, when giving notice for examination, produce a certificate similar to that required from candidates for the Licence examination (see Pharmaceutical Licence Examination, Regulation III).

Examinations shall be held on the second Wednesdays of January, April, July, and October, at eleven o'clock; or on such other dates as the Council may direct.

The following form the subjects of examination:—

PRESCRIPTIONS.—Candidates will be required to read a autograph prescriptions, translate them into English, render a correct translation of the directions for use, and detect unusual doses.

PRACTICAL DISPENSING.—To weigh, measure and compound medicines, write the directions in suitable language, finish and properly direct each package.

MATERIA MEDICA AND QUALITY OF SPECIMENS.—To recognise the Pharmacopœia chemicals in frequent demand, and specimens of roots, barks, leaves, fruits, resins, and gums in ordinary use; also to estimate the quality of each specimen submitted, and its freedom from adulteration.

PHARMACY.—To recognise the preparations of the Pharmacopœia which are not of a definite chemical nature such as extracts, tinctures, and powders, and give the proportions of the more active ingredients.

Beecham's Steamboat.

During the summer months a steam-launch is to be run up and down the Liffey by Messrs. Beecham. The hull, and every available inch out of the water, will be covered with matter regarding Beecham's pills.

Insuring Chemists.

A well known Dublin assurance company offers special terms to chemists for insurance against accidents in dispensing.

Personal.

Mr. Crinion, dispenser of medicines to the North Dublin Union, has had his salary increased from 80*l.* to 100*l.* per annum.

Jubilee Celebration of a Belfast Firm.

On Tuesday evening, March 8, the employés of Messrs. William Dobbin & Co. (Limited), chemists, Belfast, held a social meeting in Rosemary Street Lecture Hall to mark the completion of the jubilee year of the business. The firm was founded in 1841, but the celebration had been deferred in consequence of the absence of Mr. W. C. Dobbin, who has been travelling abroad for the benefit of his health. Advantage was also taken of the occasion to welcome home Mr. and Mrs. W. C. Dobbin. The company numbered about 130, consisting of the employés and their friends, together

with a few personal and business friends of the directors. Tea was served at half-past seven o'clock, after which Mr. William Dobbin, J.P., chairman of the directors, was called to the chair amid applause. He made an appropriate speech, and Mr. C. F. Weir, who followed him, congratulated him as the founder of the business in presiding over its jubilee with, he was happy to say, so much intellectual and vital force. Mr. David S. Jackson, Mr. Samuel Gordon, Mr. John Long, and Mr. John Ekin also spoke in friendly terms of the chairman and directors of the company. Mr. Weir then read the address to Mr. W. C. Dobbin, and presented him with a handsome illuminated album on behalf of the employés of the company. Mr. W. C. Dobbin afterwards gave a most interesting sketch of his travels, illustrated by limelight views, the lantern being ably managed by Mr. A. R. Hogg. During the evening solos were admirably rendered by Mrs. and Miss Gordon and Mr. W. Curran. Mr. James F. Scott contributed several readings with fine elocutionary effect. Subsequently dancing was commenced, and kept up with spirit until early morning. The proceedings throughout were most harmonious and enthusiastic.

Scotch News.

Concentration.

The United Alkali Company have commenced the process of concentration, under which they hope to centralise their manufactures. The North British Chemical-works at Clydebank have already been stopped and almost entirely dismantled. At Irvine, where the syndicate own the Eglinton and Irvine Works, an extensive restriction will be made in the manufactures. Here also the syndicate have made an arrangement with Messrs. William Henderson & Co., whereby the Union has control over the production and sale of bleaching-powder manufactured by that firm. As Messrs. Tennant & Co.'s works at St. Rollox, and Messrs. Henderson's at Irvine are quite capable of producing a quantity of that material sufficient to supply the Scotch and North of England markets, it is expected that the syndicate works at Irvine will be closed altogether. Several months ago the syndicate stopped manufacturing bi-chrome at their Eglinton works at Irvine, and as the price still remains unremunerative, it is not unlikely that the plant, which is considered very valuable, may change hands, an inspection of it having been made last week on behalf of Messrs. White, of Glasgow.

St. John for Counter-practice.

Young Aberdeen had a good time on Thursday evening of last week. The members of the Chemists' Assistants' and Apprentices' Association have had St. John's ambulance lectures during the winter, and some of them have done so well in the examination which completed the course that it was decided to honour them in a substantial way. On the night in question, therefore, there was a smoking-concert in the Palace Hotel, with Surgeon-Captain J. Scott Riddell in the chair, and a fine group of medical and pharmaceutical notables round him. When the atmosphere of the room was smoke and song laden, there came through the clouds the following gentlemen to receive their awards, viz.:—Mr. W. Pennie, 99 per cent., silver medal and certificate; Messrs H. Fraser, D Halley, and D. Philip, 92 per cent., bronze medals and certificates; while certificates were awarded to Messrs. J. Gleyd, 90 per cent.; T. Rattray, 80 per cent.; Beattie, Reedie, Stephen, Watson, and Yeats, 75 per cent. Messrs. J. Duncan, W. Bremner, C. Forbes, A Ganld, Fortune, R. Halley, A. Troup, W. Hay, R. Leslie, and G. Lemon, took honouments of a lower grade. Quartermaster do Lessert said that the examination papers returned by the members of their Association had been most satisfactory. The way they had answered the questions had reflected great care and attention on their part, and reflected great credit on the lecturer. They had shown themselves most expert in bandaging. Next came the turn of Mr. Pennie, president of the Association, his duty being to present Dr. Riddell, the lecturer, with a handsome clock, in recognition of his services, while Sergeant Humphreys, the man who has made the young Galenites expert in bandaging, had a presentation pipe and something to fill it, to remind him of the gratitude of his pupils. We have no room for the speeches, but they were hearty as Aberdonians themselves, and the song was as good. "A Druggist's Dream" was recited.—The same Association met in the rooms at Silver Street on Friday to hear a lecture on "Botany," by Dr. Beveridge, which was particularly valuable to those students who are unearthing their vascula and polishing their spuds in anticipation of a good season's work in field and wood. Dr. Beveridge spoke, however, not only of the collection, but of the preservation and mounting of specimens.

To the Rescue.

Scotland fought desperately with the English fifteen at Edinburgh last week. It was a plucky, manly fight; but the Rose had the victory. It is a mere coincidence, probably, but a portent of better things, that some of the chemists' assistants and apprentices of Edinburgh wish to form an association for pharmaceutical athletes. There is to be a meeting at the Abbotsford Arms, Rose Street, on Friday evening, March 18, at 8 30, where a good muster is desired.

Aberdeen Awa'.

Mr. James Milne has now purchased the sole interest in the business carried on at Comers, Midmar, under the style of G. & W. Murray. Mr. Milne has had the sole management and part interest in the business for a number of years.—A Medical Transfer, Partnership, Assistantship, and Locum Tenency Agency has been opened for the North of Scotland by Mr. J. Johnston, at 74 Union Street.—Mr. W. Reid, chemist, Holburn Street, read a paper before the Aberdeen Amateur Photographic Association recently, on "Copying." His object was to show how copying, either for the purpose of securing lantern-slides or for enlarging or reducing, could be carried out by amateurs who are not possessed of elaborate apparatus, and whose opportunities for copying are in the main restricted to the evening.—Mr. A. Bruce, manager to Mr. D. A. Mortimer, Chattan Place, has purchased the drug business in Crown Street, which was carried on by the late Dr. William Reid.

"Pharmacy, Rural and Urban."

Mr. Thomas Robinson read a "smart" paper on this subject to the Glasgow Assistant Chemists' Association last week. The paper was largely taken up with a consideration of the relative social and municipal opportunities of chemists in the two conditions. The author remarked that the result of his observations had been that stricter pharmacy obtained in the country than in the town. In a town competition weighed more oppressively than in the country. The consequent necessity for making money more quickly—irrespective of whether a man turned out a pharmacentical product or not—was *primâ facie* condonation of lax pharmacy. After specifying some of the styles of chemists whom the author regarded as having a soul above their business, he went on to speak about another class, to whom the title "chemist and druggist" is as a life-buoy, keeping their heads above the waters of commercial degradation. These are conditions existing in city pharmacy—the range of trading is narrow and the traders many. In the country the conditions are the opposite. The man of the country has time and inclination to test the purity and standardicity of all galenical and pharmacentical products, where in a city business this is crowded out; while the gentlemen of the cities are content to trust to the wholesale house for their daily drugs—take them as they sent them, and are thankful. As to the finish or style in which work emanating from the two classes of pharmacists went, all depends on the personal peculiarities of the principal. The proportionately less per cent. of dispensing in the country, and the more jealous care necessitated by a not too confident patient disposed him to the opinion that more neatly trimmed labels, better capping and wrapping were the rule more in the country than in the city. He believed, too, that better pharmaceutical experience could be procured in the country than in the town. A discussion followed, and the majority of the members were of opinion that country life was the best for the chemist.

An Island of Chalk.

At the meeting of the Royal Society of Edinburgh, on Monday, Dr. John Murray read a note on specimens of chalk

from Christmas Island—an island in the Indian Ocean, about two hundred miles from the coast of Java. Up to six or seven years ago no person had landed on the island, which is very inaccessible; but the Admiralty have helped in effecting a landing, and specimens of rock from the island had been forwarded to Dr. Murray. In them he had found a very large percentage of phosphate of lime. The island has been taken over by this country, and the Government have given to Dr. Ross and Dr. Murray a joint lease of it for 100 years, to do what they like with it. Recently it has been ascertained that on the island there were great quantities of white chalk. Had there been as much phosphate of lime as there was white chalk the island would have been a very valuable one. As it is, the chalk is very pure—much more pure than is generally found.

Dundee Changes.

Messrs. Davidson & Gray have disposed of their Overgate Branch to Mr. F. Young, who served his apprenticeship with Mr. C Kerr. Mr. Young has disposed of a business in Paisley in order to take up the Overgate one.—The Edinburgh Drug Store Company have taken larger premises in West Port, and are now busy removing.—Mr. James Anderson has enlarged his Commercial Street pharmacy, by taking in the flat above the shop The extension is to be used as a manufacturing laboratory.

The Hannay Divorce Case.

The divorce suit at the instance of James Ballantyne Hannay, chemical manufacturer, Glasgow, against his wife was again before the Court of Session this week The evidence was closed, and judgment deferred. The counter-action by the wife against the husband has been set down for hearing on June 15 next.

Liquidation of the Glasgow Alum and Ammonia Company (Limited).

In the First Division of the Court of Session on Saturday it was intimated that the question which had been raised between the Glasglow Alum and Ammonia Company (Limited) and Barrhead Gaslight Company had been settled. The Barrhead Company consent to the petition of the Alum and Ammonia Company for a supervision order and for confirmation of their resolutions to wind up the Ammonia Company being granted, and the petition of the Barrhead Company is withdrawn. The Barrhead Company get their expenses.

French Pharmaceutical News.

(From our Paris Correspondent.)

M. Etienne Arago, the curator of the Luxemburg Museum, who died last Saturday, commenced life as a chemist, but was noted for his work as a journalist, playwright, musician, and theatrical manager. He was the brother of François Arago, the celebrated astronomer.

A Pharmacist on the Training of Youth.—The pharmacist Arastay, whose son is now awaiting trial for the murder of an aged lady under particularly revolting circumstances, has addressed a letter to a Paris newspaper. He says that his sons have been trained with great care, and that he has always imbued them with ideas tending to the most irreproachable morality, but, unfortunately, the thing they have been most wanting in is those religious principles of which he declares himself to be a great partisan. In this matter he had never been able to do anything with them.

The Artificial Colouring of Real Flowers.—M. Planchon, a prominent member of the Paris Pharmaceutical Society, has recently studied the question of the artificial colouring of flowers, which was referred to in The Chemist and Druggist of January 23. M. Planchon, at the last meeting of the Council of Hygiene and Salubrity of the Département de la Seine, gave the result of his researches on the matter. He mentioned that the authorities had requested him to examine whether these artificially coloured flowers now so popular are harmful on account of the artificial colouring. After describing the different variations of the colouring process, M. Planchon concludes by endorsing the opinion already expressed by M. Giraud in his preliminary experiements, viz., that these flowers are entirely innocuous either by their perfume or if held in the mouth. [We observe from an American contemporary that the trick is a very old one.—Ed. *C. & D.*]

The Case of Poison in Quinine Wine, already referred to in The Chemist and Druggist of April 4, 1891, and January 16 last, has just been settled before the Tribunal of Pontoise (Seine-et-Oise). It will be remembered that three persons lost their lives on March 22, 1891, by drinking some quinine and Malaga wine at Le Raincy. M. Acard, pharmacist, 328 Rue St.-Martin, Paris, was held responsible for the calamity, the wine having been purchased from him. He appeared at the trial last week under the charge of homicide by imprudence. The evidence of Drs. Vibert, Delaborde and Crimail and the chemical expert, M. Lhote, was entirely against the unfortunate pharmacist. It showed that the quinine wine contained a considerable proportion of aconitine. In spite of his positive denials to the charge, M. Acard was condemned to prison for three months and to a fine of 8*l.* Beyond this he was ordered to pay 200*l.* compensation to the two Miss Gonalins, orphans of victims of the mistake, whose guardian prosecuted civilly in the case. Besides his retail business M. Acard has for some years carried on a certain amount of wholesale trade in English and American patent medicines, &c., in France. He styles his premises "The British Pharmacy of Paris." Formerly he was in business in the Rue St. Honoré and it was while in that English quarter of Paris that he acquired a knowledge of the language.

Paris Pharmacists and "First Aid."—A shocking illustration of the liability of Paris pharmacists to be called upon for "first aid" occurred last Thursday evening about 7 in the busy quarter of the Halles Centrales, where within a few minutes three mortally-wounded persons were carried into neighbouring pharmacies. Three men who were attempting the robbery of a wineshop were caught in the act, and took to their heels; two escaped, but the third, Eugene Crampon, was hotly pursued along the Rue St. Denis. Drawing a revolver, he brought down a pursuer and a bystander, who were carried to the pharmacy of M. Geoffrion, 20 Rue de la Grande Truanderie, where one expired shortly afterwards, and the other was conveyed to the hospital. The criminal continued his flight; a young man of 21, Joseph Bottelier, employed at M. Poindron's pharmacy, 36 Rue des Archives, seized him by the arm. Crampon once more brought his weapon to bear and the young fellow, hit in the groin, fell to the ground, still holding the assassin. This was just in front of M. Vaucheret's pharmacy, at the corner of the Rue Rambuteau, where the injured man was carried His wound being dressed he was put on a stretcher to be transported to the hospital. But before he arrived, life was extinct. The assassin thus stopped was overmastered and captured. He was nearly lynched by an excited crowd before he was rescued by the police and taken into charge.

Fire at the Central Pharmacy of the Hospitals.—A fire, which might have taken terrible proportions, broke out towards nine o'clock last Thursday evening at this State pharmacy, which is situated 47 Quai de la Tournelle. The alarm was first given from the office of the manager, Dr. Bourgoin, and the flames rapidly spread to the ante-room and staircase. Fortunately the firemen were quickly in attendance, and after less than two hours' work all danger was averted. The excitement that prevailed during this time was intense. It was well known that a large stock of spirits of wine, amounting to 30,000 litres, was stored in the basement of the Central Pharmacy, while the premises adjoining are utilised as a distillery, and there was a large store of inflammable liquid on the premises. Fortunately the fire did not reach the stores. At present it is estimated at 3,000*l.* The interior of the pharmacy is left in a very bad state. The numerous *objets d'art* which decorated Dr. Bourgoin's office are all destroyed except one, and he estimates his losses under this head at 1,000*l.* The house occupied by the pharmacy is very old. It is the Hôtel des Miramiones which before the Revolution, served as a nunnery. During the Reign of Terror it became national property, and at the commencement of this century was handed over to the Public Relief Department. The premises still contain many artistic curiosities of great value, including a unique collection of old china. Fortunately all this wealth of art was in a part of the building sufficiently remote from the fire and was in no way injured.

Pharmaceutical Society of Ireland.

THE Council of the above Society met in Dublin on March 2. We reported last week the first part of the business, consisting of an explanation by Mr. Wells of the proceedings of the Certificates Committee in regard to the refusal of registration to certain chemists and druggists. Mr. Wells considered that the published report of the previous month did not represent the affair with sufficient fulness.

Letters from the Privy Council.

The next business taken was the consideration of a letter from the clerk of the Privy Council relative to a resolution of April 2, 1879, as to the Law Committee's powers in the matter of finance. This was referred to committee.

Another letter from the clerk of the Privy Council asked the reason for the alteration it was proposed to make in the existing regulations as to the qualifications of licentiates of the Apothecaries' Hall who sought to be registered as members of the Society.

Mr. Wells: I think the President might be authorised to answer that. On my motion, it was resolved that apothecaries seeking to be registered as pharmaceutical chemists should give evidence of having worked for four years in a pharmacy.

Mr. Grindley: The Apothecaries' Hall, under the conjoint scheme, accept men for registration on three months' work in a pharmacy. We do not think that sufficient. We think it unfair to our licentiates, who have to serve four years.

Mr. Wells: The Privy Council seem to think that this regulation of ours clashes with some other; but that is not so. It has only been put under a wrong heading—viz., "Finance."

The President was authorised to set the matter right.

Other Correspondence.

Letters were also received from the Secretary of the Royal University of Ireland acknowledging the receipt of a letter asking for the recognition by the university of the Society's school of chemistry and from the General Medical Council requesting information regarding the Preliminary examinations held during the past year.

Letters were read from Dr. Atkins, Dr. Evans, and Dr. Whitla thanking the Council for having re-elected them examiners under the Pharmacy Amendment Act.

Cannot Overrule the Act.

A letter was read from Mr. John Clarke, of John Clarke & Co. (Limited), Belfast, stating that, owing to an oversight, he and Mr. William Clarke and Mr. J. F. Shields, managing directors of the firm, omitted to send in their applications in time as candidates for the principal examinations as chemists and druggists. They had, consequently, only been able to present themselves at the examination for assistants, and had had to pay an extra fee. They submitted that, having been in business as principals and having used the style of "chemists and druggists" prior to the passing of the Amendment Act, they were entitled to be registered as such under section 7 of that Act.

Mr. Baxter: It is only fair that Mr. Clarke should be registered as a chemist and druggist. I know as a fact that he has been such for many years.

Vice-President: The applicants are young men, his sons. I don't think they were in business as his partners before 1875.

Mr. Montgomery: If they can be legally registered under section 7 I support it, for they have been acting as chemists and druggists and using the title for a long time.

Mr. Wells said the Council had no power to comply with this request.

President: If we have power we should do an act of grace for a large house that has a large amount of printed matter with "chemist and druggist" on it, even though it was their own fault that they did not make their claim in time to enable them to come in under the modified examination provided for by section 7 of the Amendment Act.

Vice-President: They came in as "druggists" under section 8.

Mr. Beggs: If you open a door in this case you will have a flood of applicants.

Mr. Gibson urged that the mercantile position of these applicants should be taken into consideration.

Mr. Wells: Certainly not. The facts of the case only should be looked to, whether the applicant be the smallest or the biggest merchant.

Mr. Boyd: I am afraid we have no power under section 8 to register them otherwise than as "druggists."

Mr. Hodgson: I should be very glad to accommodate these gentlemen if I could. I know them, and would strain a point to meet their views if it were possible; but we cannot commit an irregularity. We cannot register them as "chemists and druggists" under section 8.

Mr. Gibson contended that the omission of the applicants to make their claim in time for the benefit of the "chemist and druggist" section ought not to debar them from having their registration altered so as to meet the actual facts of their case.

President: I exceedingly regret that the Council cannot see their way to granting this application. No doubt it is a very hard case, but we cannot override the Act.

Mr. Baxter: I see clearly that as they did not make their application before June 1, they are not entitled under section 7.

The Registrar was directed to write to the applicants stating that the Council exceedingly regretted being unable to comply with their request, the law not permitting it to be granted.

Purging the Register.

A letter was read from Mr. John Burke, of Castlederg, protesting against the erasure of his name from the register of chemists and druggists. He maintained that the statements he had made to the Council were perfectly correct.

President: We received an intimation that though this gentleman had been put on the register he was not qualified; and on December 18 we wrote to him saying that as he had not produced the evidence promised, unless it was produced by January 15, we would remove his name from the register. We could not go further into the matter.

Mr. Wells: We had a long correspondence with this gentleman, and gave him several months to produce evidence.

President: Since December 18 he did not reply, and we consequently gave directions at the last meeting that his name should be removed from the register: his present letter is a reply to that intimation.

Mr. Hodgson: How did he get on the register?

Mr. Wells: No one can tell how he got on, but when we look at his papers we find not a particle of evidence to justify his being put on. We got information from other sources that he was not entitled.

Professor Tichborne: You acted on information you got outside.

Mr. Wells: He was really registered without any evidence but his own. We shall have another case before us of an affidavit purporting to have been made by a man on May 14 in last year, and in reference to it we have a certificate from the Registrar of Deaths that the man died on April 8—five weeks previously—and the magistrate who witnessed the declaration said he knew it to be true.

Donations

were received from the Pharmaceutical Society of Great Britain of a copy of their Calender for 1892 and from the Pharmacy Board of Victoria of a copy of their Pharmaceutical Register for 1891.

On the motion of Mr. Grindley seconded by Mr. Wells, thanks were voted to the donors.

Is Entitled to Registration.

A report of the Declarations Committee stated that Mr. Robert Swann, of Swann's Cross, Monaghan, was entitled to be registered as a chemist and druggist.

Examinations for Assistants.

Mr. Lyons moved, pursuant to notice:—

That provision be made for holding examinations in Belfast for assistants to pharmaceutical chemists, under section 19 of the Pharmacy Amendment Act, 1890, whenever twelve or more persons shall make application for examination there.

It was only fair towards the assistants of Belfast and the rest of the North of Ireland that this arrangement should be made. Most of them were not too well paid, and would find it very inconvenient to come to Dublin for examination; and the holding of an examination in Belfast would induce a number of assistants in that part of the country to go in for it who would not come up to Dublin. Besides, great inconvenience was occasioned to employers who had to allow their assistants away for perhaps two days when they wanted to be examined in Dublin.

Mr. JOHNSTON MONTGOMERY seconded the motion, Mr. WELLS supported it, and it was unanimously carried.

The next business was the election of an Examiner to conduct the examination for assistants to pharmaceutical chemists.

Mr. JOHNSTON MONTGOMERY moved that two examiners be appointed, one for Belfast and the rest of the North of Ireland, and the other for Dublin and the South of Ireland.

Professor TICHBORNE seconded the motion, which was unanimously agreed to.

Mr. WELLS moved that Mr. John J. Bernard be elected examiner for Dublin. Mr. Bernard, who held a public appointment, was one of the licentiates of the Society, and would conduct the examination fairly and well. One of the candidates was Dr. John Evans, and his (Mr. Wells's) only reason for not proposing him was that he held two other examinerships of the Society.

Mr. GRINDLEY seconded the motion, which was unanimously agreed to.

Mr. J. MONTGOMERY moved that Dr. D. J. McKinney be appointed examiner for Belfast. They knew Dr. McKinney very well in Belfast, and would have every confidence in him as an examiner. He was a licentiate of the Society as well as a medical practitioner, and was in every way thoroughly competent to test the attainments of the candidates.

Mr. HODGSON seconded this motion, which was unanimously agreed to.

VISITORS TO THE DRUGGISTS' EXAMINATIONS.

The PRESIDENT intimated that he would attend as visitor at the examination for registered druggists to be held in Dublin on the following day.

Messrs. Lyons and Gibson were appointed visitors to attend the similar examination to be held in Belfast on March 8.

ELECTING ASSOCIATES.

The election of Mr. Alfred Clements, of Cootehill, was moved by Dr. BURNES and seconded by Mr. BOYD.

Dr. BURNES said the election of this gentleman had been delayed for months, and an unfounded charge had been made against him by a member of the Council which should now be withdrawn.

Mr. WELLS: When this gentleman was last down for election, I asked that his name should be held over for a week. I told Dr. Burnes privately that the Law Committee had some information about his dispensing prescriptions, and Dr. Burnes wrote to him telling him of it.

Dr. BURNES: I did certainly.

Mr. WELLS: In other words, Dr. Burnes wrote to the gentleman telling him that we were watching him.

Dr. BURNES: Certainly. I consider it was my bounden duty to inform any man of an accusation made behind his back.

Mr. WELLS: It was dishonourable to do so.

Dr. BURNES: He is a private friend of mine, and I should consider that I acted in an unmanly way if I did not defend my friend.

PRESIDENT: Dr. Burnes is not on the Law Committee.

Mr. WELLS said he would not remain on the Council if any member of it were to be allowed to use information privately given in that way.

Dr. BURNES: The gentleman has not broken the law.

PRESIDENT: I think Mr. Wells is taking a wrong view of the matter. Dr. Burnes has a personal friend, and heard that he was accused of compounding prescriptions. It appears that Dr. Burnes asked this gentleman was it the case, and he has indignantly denied that he ever compounded prescriptions.

Dr. BURNES: The gentleman came up to Dublin about the matter. He can prove that he has not compounded prescriptions for any person that applied to him over the counter since the passing of the Amendment Act.

Mr. WELLS maintained that the circumstance of the gentleman being a private friend of Dr. Burnes did not warrant the latter in making to him the communication that he did.

PRESIDENT: As I understand the matter, what occurred was this: When Dr. Burnes heard the accusation made he did not believe it, and inquired of the gentleman, who indignantly denied it and came up to Dublin, and was about calling on me, but Dr. Burnes told him that there was no necessity to go further in the matter.

Mr. GIBSON: I think Mr. Wells should withdraw the word "dishonourable."

Mr. WELLS: I asked Dr. Burnes not to bring forward the motion for the gentleman's election, and told him in confidence why I wanted the name held over. It was not in committee; it was while we were sitting at this table. He then rushes off and gives information. Mr. Boyd's case was a small matter compared with it. It is a very nice thing, Mr. President, for you to pass over.

PRESIDENT: What do you want me to rule?

Mr. WELLS: You are ruling that a member of the Council is at liberty to give information to a friend under the circumstances.

The PRESIDENT: I did not rule anything of the kind.

Mr. BAXTER: If Dr. Burnes got the information from a member of the Council in confidence, it would be dishonourable to use it. We sit in a public capacity, and are bound as members of the Council not to divulge secrets that the Council have under consideration. If, however, Dr. Burnes considered that he did not get the information as a member of the Council——

Dr. BURNES: I did not.

Mr. BAXTER: —— I can understand how he might have thought it a legitimate thing to do as he did.

The PRESIDENT: Dr. Burnes brought forward a resolution that this gentleman should be elected a member of the Society. You (Mr. Wells) asked me not to put his name forward. Dr. Burnes demanded why. You said, "I will tell Dr. Burnes"; and you told him your reason for requesting me not to read out his name.

Mr. WELLS: In confidence—I certainly did.

Dr. BURNES: Certainly I did not regard it as in confidence.

Mr. WELLS: I told him it was private information of the Law Committee.

The PRESIDENT: If Dr. Burnes did not understand it to be in confidence, your view of the matter is not correct.

Mr. MERRIN said he did not think Dr. Burnes meant to violate the confidence, but only to give his friend a reason for the delay about his election.

Mr. LYONS maintained that it was ridiculous to say that a member of the Council was at liberty to make use of information acquired there in the way stated.

The matter then dropped, and Mr. Clements was elected.

The following other gentlemen were elected associate druggists:—Mr. James Brown, Ilchester Street, Belfast, proposed by Mr. Gibson, and seconded by Mr. W. J. Gibson, A.D. Proposed by Mr. Gibson and seconded by the President—Mr. John Beattie, 31 Upper Frank Street, Belfast; Mr. Thomas Campbell, 128 Dover Street, Belfast; Mr. John Clarke, 12 Corporation Street, Belfast, and Mr. William Clarke, same address; Mr. Nathaniel Kirkwood, Larne; Mr. W. Lyttle, 170 North Queen Street, Belfast; Mr. Thomas May, 227 York Street, Belfast; Mr. Thomas M'Burnie, Glenarm; Mr. James K. Miskelly, 221 Cromac Street, Belfast; and Mr. Frederick W. Sweny, 1 Lincoln Place, Dublin. A number of gentlemen were nominated for election as associate druggists.

The Council then adjourned.

AN EXAMINATION FOR REGISTERED DRUGGISTS

was held at Queen's College, Belfast, by Professor Whitla M.D., on March 8. Eight candidates presented themselves (this is the lowest number yet examined here). The following were the written questions:—

Write a list of the substances contained in Part II. of Schedule A in the Sale of Poisons Act.

Write the weights of the P.B., also the measures of capa-

city The samples shown were phosphorus, arsenic, iodid., cubebs, ergot, magnes. sulph., litharge, ferri phos., hyd. perchlor., piper nig., &c.

The examination only occupied about one hour. Messrs. P. J. Lyons and Samuel Gibson, members of the Council, were present as its representatives.

At an examination at Dublin, on March 3, for the licence to act as a registered druggist, the following passed:—Messrs. J. B. Boyd, J. Duddy, W. J. Hardy, M. Martin, J. Mulligam, A. R. Smyth, and G. D. Williams. Four were rejected.

BURLINGTON HOUSE ECHOES.

BEFORE the Chemical Society was a year old it had begun to do honour to foreign chemists, and amongst the first to be honoured was Dr. R. W. Bunsen, professor of chemistry at the University of Heidelberg. This was on February 1, 1842. When the fellows, to the number of twenty or so, met on March 3, 1892, Professor Crum Brown, the President, told them that it was proposed to commemorate the fiftieth anniversary of the event by presenting the venerable chemist with an address. Professor T. E. Thorpe had been entrusted to prepare this, and he was now called upon to read it. The address was a very pretty piece of English composition. It spoke of what Bunsen had done for chemical science since his papers on Cacodyl, in the first volume of the Transactions of the Society. There is no department of chemistry which shows so much advance in Bunsen's time as the improvements in analytical processes, and this was recognised in the address by a skilful reference to many of the things which the well-known chemist has done to make analytical processes more exact, more reliable, and more expeditious than they were of old. What Bunsen has done in the improvement of chemical apparatus and furniture it would take a longer address than Professor Thorpe's to tell of, but what he said was said with grace and in keen appreciation of the master's genius. So too, in reference to Bunsen's renown as a teacher; here he has had an influence which was admirably summarised by Professor Thorpe in the few sentences that one only who has sat at the feet of Gamaliel could write. The audience gave a warm response to Professor Thorpe's estimate. Then came the papers of the evening. First there was one by the President and Dr. Gibson, his chief assistant in the Edinburgh University, on "A rule for determining whether

A Given Benzene Mono-derivative

shall give a meta-di-derivative, or a mixture of ortho- and para-di-derivatives." The President ran over with amazing rapidity the formulæ of a number of organic compounds, with a view to show that when the radicle which enters a compound is a hydroxyl-derivative it will go into the meta-position, but when the radicle is a hydride ortho- and para-di-derivatives are formed. For instance, nitric acid, $NO_2.OH$ is a hydroxyl, but water, H.OH, like hydrochloric acid, is a hydro-compound. The hydrides may be regarded as bodies which are not readily oxidisable; that is the case with water and hydrochloric acid, and the President gave many other examples of the same thing. The assertion that hydrochloric acid is not oxidisable was quickly challenged by Mr. C. E. Groves, who said that he was taught, and text-books still teach, that when hydrochloric acid is treated with permanganate of potash perchloric acid is formed. An error, said Professor Thorpe; Dr. Odling first made the observation, and at that time the permanganate was of home manufacture, and generally contained some chlorate. Professor Armstrong advanced some objections to the rule, on which the President and he began to differ in such a good-natured fashion that much hearty laughter arose. Of course the rule is only put forward as a help, and not as a conclusive solution of the difficulty. Dr. Armstrong read a paper which was on "The Relative Orienting Effect of Chlorine and Bromine." The next papers were those which had the closest attention of the sprinkling of pharmacists at the meeting. These were

"Contributions to our Knowledge of the Aconite Alkaloids."

They were from the Research Laboratory of the Pharmaceutical Society, and Professor Dunstan read them. The first paper was a record of work by him and Mr. John C. Umney on the examination of roots of *Aconitum Napellus* grown by Mr. E. M. Holmes. There could be no question of the authenticity of the plants and their roots, so there could be none about the results as comparative data to judge past investigations by, and it was to remove the doubtful element from the previous work by Dr. Ince and Mr. Dunstan that the present research was undertaken. In sympathy with the brevity of these notes hitherto, we give the results in a paragraph. The fresh roots were dried at a low heat and powdered, then exhausted with fusel oil. From this percolate the alkaloids were washed out with sulphuric-acid water, which was treated with chloroform to remove resin; after just alkalising with ammonia, the watery liquid was treated with ether, and then with chloroform, as the ether did not take out all the alkaloidal matter. The etherial solution yielded a gummy residue from which the authors extracted aconitine as a crystalline hydrobromide, all attempts to crystallise the residue itself having failed. They got a crystalline aconitine from this, and found that the base dissolves only to the extent of 1 in 4,431 of water. That accounts for the fact that when they squeezed the juice out of the fresh root they found that this juice contained very little aconitine, as the base does not appear to exist naturally in a combined state. So Professor Dunstan afterwards explained in reply to a fellow. There was another alkaloid found in the etherial liquid; it refused to crystallise, although the authors tried all known resources for this purpose. It has a bitter taste, does not produce numbness and they call it napelline, a name which has been given to something else in days gone by, but that matters not, since the something else was a mixture, which napelline (D. and U.) is not. The chloroform solution was found to contain aconine ($C_{26}H_{41}NO_{11}$).

Then followed a paper dealing with the properties of aconine and its relation to aconitine. This was by Mr. Dunstan and Dr. F. W. Passmore. There has been a good deal of doubt as to what takes place when aconitine is hydrolysed. Wright and Luff say that aconine and benzoic acid are formed; Dragendorff and Jürgens say picra-aconitine and benzoic acid, in a first stage, followed by decomposition of the picra-aconitine into aconine and methyl alcohol in the second. The authors, by heating the alkaloid with water in a sealed tube at 150° C., proved the correctness of the first statement. The decomposition is—

$$C_{34}H_{45}NO_{12} + H_2O = C_{26}H_{41}NO_{11} + C_7H_6O_2.$$

A careful study was made of the aconine, a larger quantity of it having accumulated on their hands than has probably ever before been available. Their study included the preparation and examination of the hydrochloride, hydrobromide, sulphate, and nitrate, all of which are crystallisable. Aconine itself is dextro-rotatory, its salts are the opposite; wherein it is like aconitine. The authors also tried to synthetise aconitine, and in this they achieved a notable success. The plan was to heat aconine with ethyl benzoate, and they got the following result:—

Aconine Ethyl benzoate Anhydro-aconitine Ethyl alcohol

$$C_{26}H_{41}NO_{11} + C_6H_5CO.OC_2H_5 = C_{26}H_{40}(C_6H_5CO)NO_{11} + C_2H_5OH.$$

Anhydro-aconitine forms aconitine by reaction with water. The experiment proves that aconitine is mono-benzoyl aconine [$C_{20}H_{10}(C_6H_5CO)NO_{11}$]. One or two derivatives were prepared, notably aconitine methyl iodide ($C_{33}H_{15}NO_{12}.CH_3I$), and the physiological properties of this and all the new compounds are being studied.

Mr. David Howard spoke in highly complimentary terms of the value of the research, and the President threw in a word of praise, but the only point upon which he confessed he felt in touch was that in regard to methyl-derivatives. It is questionable if any but the few in the room connected with pharmacy were able to appreciate the value of the communications, and for all practical purposes they might as well have been read before the society that has paid for the work. Afterwards Professor Dunstan showed the meeting an apparatus for shaking liquids, and Mr. William Foster read a paper on "The Origin of Luminosity in Flames." A paper on the volumetric estimation of mercury, by Mr. Chapman Jones, was also on the programme.

Chemical Industry

had its innings on Monday evening, when the London section met in the same place, under the presidency of Mr. Thomas Tyrer, F.I.C., F.C.S. The Chairman had something to say in opening regarding the forthcoming annual meeting, predicting that a thoroughly enjoyable reunion will be held. He also spoke about the election of officers of the section, stating that Mr. Wm. Thorp, B.Sc., will succeed him in the chair, and Professor Ramsay has been appointed to the vacancy on the committee.

Explosives.

There was little of trade interest in Mr. Oscar Guttmann's paper on "The Dangers in the Manufacture of Explosives." Of human interest in it there was plenty, and to spare. One knows the accidents that happen with gunpowder when it is made, but after listening to what Mr Guttmann had to say, it is a wonder that it is ever made at all. A trace of chlorine in the nitre is apt to make the mixture go off in the manufacturing process; if there is tin solder about the machinery the nitrate acts on it; the charcoal is extremely liable to spontaneous combustion; there is no better agent for the development of frictional electricity than sulphur, and if the most painstaking care were not taken the sulphur would be ignited. These and many other dangers Mr. Guttmann explained, and also mentioned many curious and interesting points in proof of the assertion that vibration has largely to do with sudden explosions. Thus, if a piece of paper is smeared with iodide of nitrogen and placed on a bass violin, drawing the bow across the E string does nothing, but as soon as the G string is touched an explosion results. Guncotton was then dealt with and nitroglycerine, special attention being given to the details of the manufacture. Strange to say, there are not nearly so many dangers in this industry as there are in gunpowder-making. Lightning-conductors received a large share of attention, and a good discussion followed the paper, in which Colonel Majendie took part. Everybody was clearly of opinion that in no country is the industry so safe as in England.

Professor Noel Hartley's recent note on

The Acidity of Drawing-paper

is not to pass unchallenged. Dr. P. Norman Evans and his partner, Dr. Quirin Wirtz, who are consulting chemists to the Paper-makers' Association, had a neat reply to it. The sulphuric acid, Professor Hartley has said, used in treating the paper pulp is not properly washed out, and the paper reacts acid with litmus and helianthin. Highly improbable, Drs. Evans and Wirtz reply—the pulp is washed for four hours in a stream of hard water; what has misled Professor Hartley is the alum added to the paste used in sizing the paper. This gives an acid reaction with litmus and helianthin, but not with Congo red, whereas the merest trace of sulphuric acid gives a blue colour with Congo red. Samples of Whatman's paper obtained direct from the factory behaved in accordance with that statement. Moreover, quantitative analyses were made of the soluble matter dissolved out of 50 grammes of paper with boiling water. The percentages of bases and acid found were as follows:—

	SO_3	Al_2O_3	CaO	MgO
Double elephant ..	0·8025	0·1328	0·1856	0·0937
Imperial 140-lb. ..	0·6685	0·0548	0·2264	0·0145
Imperial 96-lb. ..	0·6520	0·0940	0·2648	0·0153
Imperial 72-lb. ..	0·5939	0·0840	0·2612	0·0561

Only in the case of the imperial 140-lb. were the bases found in insufficient quantity (0·044 per cent.) to account for all the SO_3; in the other three cases there was an excess of bases. The acid of course existed as potash alum (0·4163, 0·1718, 0·2946 and 0·1037 per cent. in the four samples), calcium sulphate, and magnesium sulphate. The authors concluded that although it is possible that alum may act on certain colours, such as ultramarine, it would, in the absence of experimental data, be hazardous to express an opinion as to the nature and extent of such action.

This paper was read by Mr. Bevan, who also added a note by Mr. Cross and himself, in which it was pointed out that Professor Hartley is wrong in the assumption that linen is used in making these papers. Cotton rag is generally employed. Otherwise their conclusions were the same as those recorded above. Although the hour at which these papers were read was late, quite a spirited discussion followed, but it was all against Professor Hartley. Incidentally Mr. W. Thorp mentioned that it is exceedingly difficult to get ammonia washed out of filtering-paper, which contamination, by exposure, is very common. He had washed papers with pints of pure water, and still the ammonia stuck to the fibre.

Before the members separated the Chairman called attention to a fine chemical balance which carries its own weights (100 grammes and downwards), these being attached to levers actuated from the outside, thus rendering it possible to weigh without disturbance by atmospheric vibrations.

Anticipatory.

The arrangements for the remaining meetings of the section are very good.

On April 4 Dr. C. R. A. Wright, F.R.S., will read a paper on "Specific Gravities for Practical Purposes," Mr. Adolphe Baur, Ph.D., one on "Artificial Musk," and Mr. F. H. Leeds, F.I.C., F.C.S., will communicate a "Note on Rosin Oil."

On May 2 Professor Wm. Ramsay, F.R.S., will speak on "The Distillation of Wood," and Dr. S. Rideal continues his "Notes on the Composition of Some Indian Gums of Known Origin."

The subjects for June 6 are "Vinegar," by Mr. J. A. Nettleton, and "The Petroleum Jellies of Commerce," by Dr. S. Rideal.

The annual general meeting will probably be held Wednesday, Thursday, Friday, July 13, 14, and 15.

South Sea Arrowroot is the product of *Tacca pinnatifida*, Forst. This is a perennial herbaceous plant, with a tuberous root. As a source of arrowroot the plant is of great value. The tubers when fresh resemble new potatoes, and contain a great deal of starch. Tacca arrowroot is preferable to any other in cases of dysentery and diarrhœa.

The Rise in Chemicals.

In the City of London Court, on Saturday, before Mr. Commissioner Kerr, the case of A. J. Brown Brough & Co. *v.* Lyon was heard. The plaintiffs, chemical-merchants, of 29 Warwick Lane, E.C., sought to have the defendant, Mr. Frank Lyon, soap-merchant, 94 Harleyford Road, Vauxhall, committed to Holloway Goal, for the non-payment of 23*l* for chemicals supplied in the way of trade.

The defendant said he regretted that he had no means of payment except by instalments of 15*s*. per month. It was untrue that he employed four or five men. He used to employ several hands, but he had discharged his foreman only a fortnight since.

The plaintiffs' representative said the debt was incurred for goods supplied to the defendant in the way of his trade —for chemicals to use in the manufacture of soap. The defendant was a large manufacturer.

The defendant said that was not so. Owing to the establishment of the Alkali Union a great rise in the price of chemicals had taken place. In that way his profits had been very considerably reduced Indeed, his profits were 75 per cent. less than they were in former years.

Mr. Commissioner Kerr: They must have been pretty considerable if there is all that difference.

The Defendant: There has been a rise on one of the chemicals I use from 4*l*. 15*s* to 7*l*. 15*s*.

Mr Commissioner Kerr: You must just go through the general form. All these rises in prices come out of the public ultimately. You must raise the price of soap in turn.

The defendant added that in consequence of the competition which had ensued from the increased prices he had had to reduce his charges by 5 per cent. On a turnover of 3,000*l*. a year that made a loss of 150*l*. a year to him. His profits a few years ago were 450*l*. a year, and now they were reduced to 100*l*., and that was how he had got into difficulties.

Mr. Commissioner Kerr ordered payment of the debt by instalments of 1*l* per month. adding a "word of advice" to the parties to "deal for cash in future."

Radam's Microbe-killer Company.

In the Chancery Division on Friday, Mr. Justice Stirling had before him an application on the part of Mrs. Lee to restrain the Microbe Company from exercising a lien they claimed to have under the articles of association upon shares standing in the name of their former manager Leathers. The Company have obtained a judgment against Leathers to the extent of 400*l*. Mrs. Lee says an agreement was entered into between herself and Leathers by virtue of which she was entitled to half the shares. Mr. Justice Stirling refused to grant any injunction, and dismissed the motion, with costs.

Cough-lozenges and the Medicine-stamp Acts.

On Thursday, March 3, two informations under the Medicine-stamp Acts were heard before the Borough Justices at the Town Hall, Ipswich, the Mayor presiding. The defendant, Mr. J. R. Reeves, was charged with selling a medicine liable to stamp-duty without a stamp, and also with selling the same medicine without a licence, the penalties being 10*l*. and 20*l*. respectively. Mr. Alpe conducted the proceedings for the Inland Revenue Department. The medicine sold was a penny box of cough-tablets, made principally of sugar and strongly flavoured with paregoric. By the label on the box they were described as "Reeves's celebrated home made cough-tablets," and under the description were the words, "A challenge to the world." Round the rim of the label was printed, "Sole proprietor, J. Rivers, 8 Great Chapel Street, Wisbeach." For the defence it was contended that the tablets were not "medicines," and therefore not liable to duty; but the attention of the Bench was directed to 55 Geo. III., c. 184, s. 54, which enacts "that nothing contained in this or any other Act shall extend or be construed to extend to charge with any stamp-duties ginger and peppermint lozenges or any other article of confectionery, *unless* the person vending the same shall vend the same as medicines, or as beneficial to the prevention, cure, or relief of any distemper, malady, ailment, or disorder incident to or in any wise affecting the human body." The Bench considered that the tablets were vended as a medicine for coughs, and fined the defendant 10*s*. for selling the medicine unstamped, and 5*s*. for selling it without a licence.

Mr. Sargent's Letters.

At the Kent Assizes on Monday, before Sir John Charles Day, the indictment against Mr. George West Sargent, dispensing chemist, of 75 Church Street, Kensington, for publishing a false and defamatory libel concerning Alexander Bottle, J.P., of Dover, Vice-President of the Pharmaceutical Society of Great Britain, came on for trial. There were sixteen criminal charges in the calendar, and the libel case did not find its way before the Grand Jury until the afternoon. With the last batch of "true bills," the one against Sargent was handed down, and although there was a jury sworn to go on with another case, on it being represented that there were several witnesses from a distance waiting in connection with the libel case, Mr. Justice Day desired the plea to be taken at once so that the case might be speedily settled. George West Sargent was called to surrender, when promptly the grey and somewhat careworn man began to tug at the iron gate of the dock, to stand on his deliverance. He, being a stranger to the officials, was not at first recognised, and again his name was called, when a more vigorous tug at the iron gate arrested attention. Under the guidance of a warder he was taken to the front entrance, whereupon the Clerk of Arraigns unrolled a formidable piece of parchment several feet long, on which there was engrossed an indictment of five counts. He read the first, which was to the effect that on November 21, 1891, the defendant did unlawfully write and publish a malicious and defamatory libel of and concerning Alexander Bottle, of Dover; and he added that there were four other counts relating to similar charges. To each and all the defendant, without reservation, pleaded guilty.

Mr. Forrest Fulton, M.P., instructed by Messrs. Flux, Son & Co., solicitors to the Pharmaceutical Society, appeared for the prosecution, and Mr. Marshall Hall represented the defendant.

Mr. Forrest Fulton said that the defendant having pleaded guilty, there was no desire on the part of Mr. Bottle to press the case hardly against him, but there was a strong feeling on the part of the Council of the Pharmaceutical Society that the proceedings in which the defendant had been engaged of sending letters of an offensive character broadcast should be stopped. He had sent several letters addressed to Mr. Wolleston Knocker, Town Clerk of Dover, in which he made very serious charges against Mr. Bottle in connection with his office as Vice-President of the Pharmaceutical Society. Perhaps his Lordship had already seen them on the depositions.

The Judge: I have read all the depositions through very carefully, but I failed to read the letters.

Mr. Forrest Fulton: Well, my Lord, they are a little difficult in the originals.

The Judge: I cannot make anything out of them.

Mr Forrest Fulton: If your Lordship pleases, I will read the principal ones. They are all addressed to Mr. Wolleston Knocker, Town Clerk of Dover. The first one was received by

Mr. Knocker on or about November 14, at his office in Dover, and addressed to the Town Council of Dover, as follows:—

Kensington, W., November 13, 1891.

DEAR SIR,—I am instructed to enquire the reason the Council of Dover have taken no active measures in the prevention of fires and explosions of chemical origin by wholesale druggists and allied trades through illicit carriage, storage, and transit referred to in page 45 of the Pharmacy Act, inland and continental. The matter has been before the City and London County Council Committees some time.

By order of the Committee,

Yours truly,

Town Council, Dover. G. W. SARGENT.

Two other letters were received by the Town Clerk from the defendant, and then, on November 21, Mr. Knocker received the following:—

Kensington, W., November 20, 1891.

Transit of Poisons, Inflammable Drugs, &c.

DEAR SIR,—Might I venture to inquire if the Corporation have made investigation of the charges of fraud against the President of the Pharmaceutical Society in conjunction with Mr. A. Bottle, also a member of the Council, in abstracting of the regulations relating to poisons, &c., from various issues of the calendar of the Society which appear in 1891? Dover seems to be mentioned rather too freely throughout the entire trade.

Yours truly,

Town Clerk, Dover. G. W. SARGENT.

He also received another on December 22 as follows:—

75 Church Street, Kensington, W.,
December 21, 1891.

DEAR SIR,—I shall be glad to know if my letters have been under consideration with regard to Mr. A. Bottle, Vice-President and member of the Pharmaceutical Council by fraud, corrupt, illicit practices, and also at present filling the position of local secretary of the Pharmaceutical Society, and if any steps have been taken to restrain the said Mr. A. Bottle from administering the Pharmacy Act by fraud, corrupt and illicit practices.

Yours truly,

Town Clerk, Dover. G. W. SARGENT.

And on January 21, 1892, the following letter was received:—

75 Church Street, Kensington, W.,
January 21, 1892.

Transit, Storage, &c., of Poisons and Inflammable Drugs.

Re Alexander Bottle, 37 Townwall Street, Dover.

DEAR SIR,—I am instructed to inquire the reason no criminal proceedings have been instituted against the above with regard to abstractions of poisons regulations from the various issues of the calendar of the Society, which appear in the issue of 1890, page 45. The Corporation of Dover continues to be reported badly, and places the country in confusion and alarm.

Yours truly,

Town Clerk, Dover. G. W. SARGENT.

And there was another which I need not read.

The Judge: But what is the charge which he makes? What does he refer to? I don't know what Mr. Bottle is supposed to have done.

Mr. Forrest Fulton: Well, my Lord, in one of these letters he charges Mr. Bottle with obtaining his office of Vice-President of the Pharmaceutical Society by fraud and by corrupt and illicit practices, and similar letters with similar charges have been sent broadcast, and there is scarcely a town of any importance throughout the country where similar letters have not been sent.

The Judge: But not about Mr. Bottle.

Mr. Fulton: No, my Lord; but it was necessary that some steps should be taken to stop this abominable nuisance. The defendant had pleaded guilty, and was understood to express regret for what he had done, therefore, under those circumstances, as far as Mr. Bottle was concerned, if he entered into recognisances not to repeat those annoyances in future, the prosecutor would be satisfied. Mr. Bottle held a very high position in Dover, where he was a magistrate and had been mayor, therefore the charges made again t him had done him no injury; but to other persons such charges of fraud and corrupt practices might be very serious in their consequences.

Mr. Marshall Hall, on behalf of the defendant, said that there were a few facts which he might lay before his Lordship. It was a very sad case, no doubt. The defendant had held a very responsible and trustworthy position as a tradesman carrying on a considerable business, and for a great many years he had been carrying on his business as a chemist by examination of the Pharmaceutical Society. But his mind had been somewhat worried by the fact that a number of large stores had been set up, and they were dealing in drugs in such a manner that it was very difficult indeed for small dealers to compete with them; in fact, it was almost impossible for small chemists to cope with the keen competition. He had thought that these large concerns were not properly regulated, and this had preyed on his mind to a very considerable extent. He did not mean to suggest that his client was not responsible for his actions; but he would repeat, this thing had preyed on his mind—it was like water dropping continually on the same place—and eventually he seemed to have got the impression that every man's hand was against him. He, however, desired to offer every possible apology to Mr Bottle, and he was extremely sorry that he should have done anything to annoy him, for he had no personal feeling against him; and, whatever his feeling in the future might be as to the regulations of the large drug stores to which he had alluded, the defendant would not in the future write or do anything to annoy Mr. Bottle, and he would enter into any engagement that his Lordship might wish.

The Judge: He had better enter into his own recognisances to come up for judgment when called upon, and if these annoyances are not repeated he will hear no more of it.

The recognisances were then taken by the Clerk of Arraigns, and the Judge, addressing Mr. Sargent, said, "If the annoyance is not repeated you will hear no more of the matter. You are now at liberty."

Mr. Sargent, as he left the the dock, said he had only sent a very few letters except those that were sent to Dover.

LENDING SYPHONS.

THE case of Johnson *v.* Masham & Kettle, which was of some interest to the mineral-water trade was tried before Mr. Justice Mathew and a common jury, on March 2 and 3.

The plaintiff, Mr. James Johnson, is a mineral-water manufacturer, trading as T. B Laws, and he sued the defendants, Messrs. Masham & Kettle, a firm of grocers, for the price of bottles and syphons lent by him to them. The syphons cost 2*s.* each, and the bottles 1*s.* 10*d.* per dozen.

The plaintiff's case was that in March, 1890, it was verbally agreed between him and defendants that he should supply them with mineral waters during the season at certain prices, the defendants undertaking to return all bottles and syphons lent to them.

The defendants, on the other hand, alleged that the plaintiff supplied them under an agreement in writing, in which they expressly disclaimed responsibility for the bottles and syphons, but undertook to use all reasonable care. This agreement was, according to their account, in the possession of the plaintiff, and their copy had been lost or mislaid, and could not be produced. The plaintiff denied that any agreement had ever been made in writing.

The plaintiff was called, and said that from time to time he sent accounts to defendants of the bottles and syphons owing to him, and asked them to return empties. The defendants returned some, but a large balance remained. He was content with this, so long as there was a continuous open account with the defendants; but when they ceased to deal with him, he wrote requiring them to return all bottles and syphons and boxes still due to him, or to pay their value. The reply which he received from defendants' solicitors was the first intimation that they repudiated their liability.

In cross examination, plaintiff said that he was president of the Bottle Exchange, through which he sometimes recovered many more of his own bottles than those which he put in belonging to other makers. He could not tell by whom the bottles he took out were returned to the Exchange. Sums varying from 1½*d.* to 5*d.* per dozen were paid for bottles taken out. He admitted that some publicans were not charged for bottles by him, and that it was not usual to charge green-grocers and others in the common trade; but there were no grocers whom he did not charge.

On behalf of the defendants, it was urged that, as the prices were not lower than those they had paid to other makers, it would be absurd to suppose that they undertook the additional responsibility for the bottles without any compensating advantage. Their liability was simply that of bailees—*i.e.*, only for loss due to their negligence.

The defendants were called, and stated that grocers could not always get bottles back from their customers; but the universal practice was not to charge a deposit on them.

Evidence as to the defendants' dealings with other manufacturers was not admitted, the sole question being whether there was an express agreement between the parties.

The jury found for the plaintiff, and judgment was given accordingly for an agreed amount, with costs.

Libelling a Salford Druggist.

In last week's Chemist and Druggist we published a report of a case in which a young man named John Sutherland, a clerk, summoned Mr. James Denton, chemist and druggist, Regent Road, Salford, for obtaining money from him by false pretences. What was alleged was that Denton, by representing himself to be a medical man who could cure Sutherland of a certain disease, obtained from him sums amounting in all to about 100*l*. The summons was dismissed, and a summons for libel was granted against Sutherland.

Summons number two was heard at the Salford Police Court on Wednesday, before Mr. Makinson, stipendiary magistrate. Mr. McKeand appeared as counsel for Mr. Denton, and Mr. Parry for the defendant.

Mr. McKeand said the charge against Sutherland was that of having, on February 14 and other dates between that and February 18, published certain defamatory libels concerning Mr. Denton. It was not necessary to go into the facts in detail, in view of the course his learned friend on the other side proposed to take, and which had the full approval of the prosecution. Briefly, the facts were these. That Mr. Denton was a well-known chemist and druggist in Regent Road, Salford, and that he had been carrying on business for some twenty-six or twenty-seven years. Some years ago the defendant called upon him. He was suffering from some nervous complaint, for which he was treated for some short time by Mr. Denton. Subsequently the defendant consulted Dr. Lloyd Roberts, a medical gentleman well known to all present, and as he continued to suffer from the same complaint, he came back to Mr. Denton, and was treated in the same way as before. For some reason or other he appeared to have imagined that he was improperly treated. However, he let the matter drop for about seven years, and then he put in circulation concerning Mr Denton one of the most scandalous and shocking libels it was possible to imagine. His Worship knew exactly what the contents of the circular were, and he could imagine Mr. Denton's feelings. It was not now asked that the defendant should be punished by being sent to prison. All Mr. Denton desired was that his character should be clearly asserted before the public of Salford, where he had carried on business in an honourable and proper manner, and that the defendant should be prevented by operation of law from repeating these libellous paragraphs which he had inserted in the circulars to which reference had been made. He might add that the circulars had been sent to all the members of the medical profession and to practically all the chemists in the town. He understood that counsel for the defence concurred in all he had said, and that the defendant was prepared not only to apologise but to withdraw altogether the statements and allegations he had made against Mr. Denton.

Mr. Parry said that on behalf of the defendant he wished to concur in all that had been said. Mr. Sutherland, as the Court was perhaps already aware, had for thirteen or fourteen years been suffering from diseases of a most painful nature. No doubt this had preyed upon his imagination, and from reading the circular it was perfectly clear that the disease had deprived the defendant of—he would not say his right reason, but, at any rate, of the power of looking at matters in a healthy light and of really understanding the nature of the words he was uttering. The circular had only been sent to the medical profession. His learned friend, and the gentleman for whom he appeared, had taken a merciful and wise course in not taking the matter to a higher court, and, on the part of the defendant, he begged to withdraw and to sincerely apologise for all the libellous statements that he had made.

Mr. McKeand: There is only one thing I would suggest, and it is that you should adjourn this summons for six months to see if the defendant really keeps the promise Mr. Parry has made on his behalf. You have power to do it.

Mr. Parry: This is a new suggestion—one that my friend has not made before, and the only objection is that if it is adjourned other influences might be at work. I think it is a pity the matter should not end here.

The Magistrate: Of course, Mr. McKeand, I see nothing to prevent you from beginning *de novo* at any time should occasion arise.

Mr. McKeand said he left the matter entirely in the hands of the Court.

The Magistrate said he was glad Mr. Denton had seen fit to withdraw the prosecution. He only did so, no doubt, feeling satisfied that such a course would not be resumed on the part of the defendant, and that the apology would be made known to all to whom the defendant had circulated the libel. That it was a gross and scandalous libel there could be no doubt. On the face of it it was possibly—indeed, probably—one of the worst libels that one man could publish of another. But he thought Mr. Denton was acting wisely in not proceeding, because he thought that even a casual reader who did not know the facts of the case would have come to the conclusion that the circular was the outcome of a diseased imagination—that the man had got into this fearful nervous state and imagined that it was all due to the negligence, or something worse, of somebody else. It was hardly a thing that one would take seriously as affecting the reputation of any gentleman of standing in the borough. It was a good thing for the defendant that Mr. Denton had taken the course he had, as otherwise there could be no doubt what the ultimate result would have been, and that notwithstanding the disease to which he was subject, the defendant would probably have spent a long time in gaol. However, the prosecutor being satisfied, he was quite content to accept the suggestion that had been made, and the case would be dismissed.

Must Sue the Principal.

In the Westminster County Court, on Wednesday, the Johannis Springs Company brought an action against a Mr. Charteris to recover a glass facia and a large exhibition-bottle, or their value, which was set down at 6*l*. 6*s*. Counsel for the plaintiffs pointed out that last year his clients had a kiosk at the Royal Naval Exhibition, and on the roof of the building was a large bottle and an embossed-glass facia, which were the subject of the present action. At the close of the exhibition a contract was entered into, by which the defendant agreed to purchase the kiosk, as it stood, for the sum of 125*l*., but it was specially stipulated that the bottle and facia, which formed an advertisement on the roof, were to be returned to the plaintiffs when the building was removed. It never had been returned, however, and the plaintiffs now sought to recover its value. The defendant appeared in person, and admitted all that had been said, but contended that he was only the agent of a principal in the matter, and that principal he had disclosed to the plaintiff when the bargain was entered into. The learned Judge said if that was so, the plaintiffs' claim must fail, and there would be judgment for the defendant, with costs.

"Do You Sell Colic-draughts Here?" asked a countryman of a chemist the other day. "Yes," answered the knight of the pestle, hesitatingly. He was a town-bred man, and did not care to say much about horses and cattle, but he had a copy of "Veterinary Counter Practice" on his desk book-shelf, and thought he would rely on that. "What's your price?" "Eighteenpence each" (this after a glance at a good recipe). "Eh! Mr. Blank charges only a shilling. I suppose yours are better." "Yes, mine are very good draughts; they go straight to the spot"; and he had the order for half-a-dozen. That was good business. Without "Veterinary Counter Practice" it was impossible, and that was our idea when we employed experienced veterinary surgeons to compile the book. Its success has shown that it was wanted, and the profit on half-a-dozen colic-draughts pays for more than the price of it—3*s*. 6*d*. All the wholesale druggists stock it, or it may be obtained by post from 42 Cannon Street, E.C., for 3*s*. 9*d*.

Trade Notes

MR. H. G. NOAKES, at present the manager of Messrs. B. Noakes & Co.'s Tinplate Works, Dockley Road, Bermondsey, announces that he will take them over himself from April 1 next.

MR. J. MORGAN RICHARDS has obtained permission from the Board of Inland Revenue to supply lactopeptine, "unstamped for dispensing," in the 1-oz. sizes as well as in the 4-oz. and 8-oz. bottles as heretofore.

Mr. H. HELBING, F.C.S., analytical and consulting chemist, has removed to more commodious premises in the building, 63 Queen Victoria Street, E.C., where he has hitherto carried on business, and has established a new laboratory and larger offices.

MESSRS. HERTZ & COLLINGWOOD inform us that they have purchased the concession for the Rosbach waters, which are naturally aërated waters, very much liked where they are known, obtained from a spring near Homburg. Messrs. Hertz & Collingwood intend to make them popular in this country as a table water.

IN our note on the Sanitas Inhaler last week, we omitted to mention that there is an inlet for air at the bottom of the inhaler, the object of this being to ensure that the air inhaled shall traverse the whole of the column of antiseptic and become well medicated before reaching the mouth. This is claimed by the Sanitas Company to be a special feature of the inhaler.

MESSRS. WILLIAM EDWARDS & SON, of 157 Queen Victoria Street, E.C., have just issued a new edition of their catalogue of British and foreign patent medicines. To this is appended a list of druggists' sundries. Prices are in all cases quoted net. We notice that THE CHEMIST AND DRUGGIST manuals (Art of Dispensing, Veterinary Counter Practice, &c.), are quoted in the first section.

Personalities

MR. PEGG has taken Mr. Trinder's business at Solihull, Birmingham.

MR. E. J. PARRY, B.Sc., has just joined the research staff of Idris & Co.

MR. BERTIE S. WOODS, for many years dispenser at the Stanley Hospital, Liverpool, has resigned.

MR. GEORGE M. MAKIN, late with a Strand perfumery house, is now representing Messrs. Sharp Bros., 12 & 14 Southampton Row, W.C.

THE Kensington Vestry have passed a vote of condolence with the family of the late Mr. Jas. Garner, chemist, who was for many years a member of the vestry.

MR. R. JEFFERSON DODD, 70 Tottenham Court Road, W., has just purchased the business of Mr. Felix Stevens, at 123 Judd Street, W.C., which he is to carry on as a branch.

MR. WILLIAM SAUNDERS, the well-known pharmacist of London, Ont., has been appointed special commissioner for the Dominion of Canada to represent the country at the Chicago World's Fair.

MR. FRANK S. CLARABUT, who has been representing Messrs. A. & F. Pears and other firms in South Africa, has returned. Letters addressed to him at St. George's Club, Hanover Square, will find him.

THE business of Mr. A. W. Heaver's, Rosary Corner, Thorpe, Norwich, has been sold to Mr. Arthur Lowe, of the same city, and will be carried on by him as a branch of his present establishment, 15 St. Stephen's Road, Norwich.

MR. BENJAMIN WATERHOUSE, chemist and druggist, Broad Lane, Sheffield, has purchased the old-established business carried on by the late Mr. G. F. Lockwood, on Sheffield Moor. Mr. Waterhouse was formally an assistant with Mr. Lockwood.

MR. WM. LOCKWOOD, trading as Wm. Lockwood & Co., chemical brokers, Liverpool, has disposed of his business to Messrs. McMillan—father and son—who have been in his employment for many years. The style of the new firm will be McMillan & Son.

MR. J. D. SMITH, J.P. for the City of Norwich, has on attaining his 80th year been entertained by the Mayor and magistrates at luncheon at the Guildhall in honour of the event. Mr. Smith, although taking no active share in commercial matters, still remains the senior partner in the old-established firm of Smith & Sons, wholesale druggists and manufacturing chemists.

MR. WYNDHAM R. DUNSTAN, M.A., F.I.C., F.C.S., University Lecturer on Chemistry, Oxford, Professor of Chemistry in the School of Pharmacy, and Director of the Research Laboratory of the Pharmaceutical Society, has been appointed Lecturer on Chemistry at the Medical School of St. Thomas's Hospital. The appointment is reported to be worth 350*l.* a year, and we understand that Mr. Dunstan made it a condition of his application that he would not be required to resign his pharmaceutical appointments. This condition the St. Thomas's Hospital Medical School authorities have agreed to.

Notes of Novelties.

KALODONT.

MESSRS. F. A. SARG'S SONS & Co., of Vienna, show us the style in which their glycerine tooth-cream "Kalodont" is put up, and the very handsome show-cards which are sent out with it. These are very attractive, and are calculated to make the tooth-cream sell. We may say that it is a nice preparation to use, and is powerfully antiseptic. The trade may obtain the paste through Barclay & Sons (Limited).

"MISCIBLE" COCA.

MESSRS. WRIGHT, LAYMAN & UMNEY, of 50 Southwark Street, S.E., send us a specimen of a new liquid extract of coca which they are introducing. This is a preparation from which the wax and chlorophyll of the leaves have been been eliminated without the use of alkalies. The liquid has a fine pale brown colour, and the aroma and taste of the drug are not in the slightest altered. The extract mixes with water, syrup, spirit, and wines, and as a definite and elegant product for prescribing or as one for the preparation of coca specialities it will make a position for itself.

"A NEW TIP" IN CATHETERS.

MESSRS. HOCKIN, WILSON & Co. are responsible for this heading. They have introduced a soft and exceedingly flexible material, of which Irish linen is the basis and olive-elastic gum the covering. They are as smooth as glass, and to overcome any disadvantage which the softness of the tissue carries with it, there is placed just inside the tip of the instrument a tiny cylinder of non-corrodible metal. This is the new tip referred to: it gives that rigidity necessary without militating against the obvious advantages of the soft catheter. Recent improvements in the catheters warrant us in bringing these remarks under this section, for in the original form they have had the approbation of the medical profession for three years. Messrs. Hockin, Wilson & Co. have also added to their list of special pharmaceutical preparations a liquor mangano-ferri peptonati, which exhibits the hæmatinic properties of manganese and iron in a palatable and readily assimilable form.

LIVERPOOL PHARMACEUTICAL STUDENTS' SOCIETY.

A MEETING of this Society was held on Thursday, March 3, Mr. H. Wyatt, jun., president, in the chair.

Tr. Benz. Co. Pessaries.

Mr. Mitchell called attention to the following prescription:—

Tinct. benzoin. co.

As much as can be got into a 60-gr. pessary with ol. theobrom.

By melting 50 grains ol. theobrom. and, while fairly warm, adding 30 minims of the tincture, and stirring till globules of spirit are no longer visible, a very good pessary may be obtained. Evaporation of the tincture produces a sticky mass of resin, which is difficult to combine with the oil, and is, on the whole, unsatisfactory.

Some Micro-Chemical Reactions in Practical Botany.

Mr. J. S. Ward, F.C.S., principal of the Liverpool School of Pharmacy, delivered a lecture on this subject. In this Mr. Ward referred to the importance which the microscope now has for pharmaceutical students, and mentioned that, though one is able to cut nice sections, that is only the first step in a very interesting, though at times difficult, study. He then described how cellulose tissues are stained, so as to bring out the points of structure with clearness; and similarly with various cell-walls found in vegetable tissues. The examination for proteids was explained, and under "carbohydrates" useful hints were given for the detection of dextrin, starch, inulin, &c. Mineral matter, fats, resin, and tannins were also referred to, and the lecture, as a whole, gave the Society much satisfaction.

Mr. Wardleworth proposed that, with Mr. Ward's consent, the lecture should be printed and distributed to members of the Society, as the concise analytical charts which the lecturer had shown would prove of great value to students. Mr. Ward agreed to assist in carrying out this proposal. A hearty vote of thanks, proposed by Mr. J. Shacklady and seconded by Mr. Woolliscroft, brought the meeting to a close.

MANCHESTER PHARMACEUTICAL ASSOCIATION.

THERE was quite a respectable muster of the members of this Association at the closing meeting of the session, held on Wednesday night, at the Victoria Hotel. Mr. George S. Woolley, the president, occupied the chair. About an hour was spent in the discussion of the topic of "Pharmacy Law," introduced in a short paper by Mr. James Hart. The paper and discussion were so interesting that they will not spoil by being held over till next week. The subject of pharmacy law having been disposed of, Mr. Blackburn, the hon. secretary, revived the proposal made at last meeting for holding a social gathering. He had been much out amongst the chemists and druggists of the district, he said, and he found that many of them said the evenings were the busiest time with them, and they could not attend the ordinary meetings; but they would be glad to turn up at a smoking-concert, a free dinner, or anything of that sort. "Besides," they said, "something of that kind would look nice when reported in THE CHEMIST AND DRUGGIST." Here the meeting smiled, and our representative hid his face in his hands to conceal his blushes. Continuing, Mr. Blackburn said he thought it would be well to bring a successful session to a close with a smoking-concert, and he moved accordingly. He added that, judging from the number of papers he had been promised, next session would be a very successful one. The motion was seconded by Mr. Pratt, and unanimously adopted. A committee was appointed to make the necessary arrangements. At the close of the business an adjournment was made to an adjoining room where a few minutes were pleasantly spent with a microscope and slides lent by Mr. Turner, of the Manchester College of Pharmacy.

NEW COMPANIES.

Carlisle and Cumberland Aërated Water and Beer Bottle Exchange and Trade Protection Society (Limited).—Object: to protect the bottles and boxes of members bearing their name or trade-mark from being used or dealt with by other persons. The company is registered by guarantee, and for the purposes of registration it is declared to consist of twenty members, with an individual liability, in the event of the winding-up of the company, of 1*l*. Registered office, 24 Bank Street, Carlisle.

St. Rollox Apothecaries' Company (Limited).—Registered in Scotland. Capital 10,000*l*., in 1*l*. shares. Objects: the manufacture of, vending, dispensing, and otherwise trading in drugs, chemicals, patent medicines, and other goods pertaining to said trade or business; to acquire the whole stock, plant, and appliances and other fittings, furniture, and materials in the different premises situated at 172 Castle Street, 157½ Garngad Road, and 44 Alexandra Parade, Glasgow, occupied by the St. Rollox Apothecaries' Company; and to acquire, from time to time, such other stock, plant, appliances, and materials or otherwise as may be necessary for the proper objects of the company.

Nectar Cream Beverage Company (Limited).—Capital 4,000*l*. in 1*l*. shares. Objects: To carry on the businesses of, manufacturers of and dealers in lemonade, soda, aërated, mineral, and other waters, beverages, cordials, corks, stoppers, syphons, &c. The first subscribers (who take one share each) are:—J. H. Kendall, Blyth, chemist; W. H. Manners, Blyth, surgeon; F. W. Carnaby, Blyth, chemist; J. Marshall, Blyth, engineer; E. R. Kendall, Blyth, medical student; E. J. Elliott, Choppington, merchant; and E. J. B. Carnaby, Blyth, moulder. There shall not be more than five nor less than two directors, and the first are J. H. Kendall, F. W. Carnaby, and E. J Elliott. Qualification, 250*l*. Remuneration to be determined by the company in general meeting. Registered office, Stag Yard, Percy Street, Newcastle-upon Tyne.

The Export Chemical Company (Limited).—Capital 6,620*l*., in 1*l*. shares. Object: to purchase or otherwise acquire certain patents relating to an invention for improvements in the packing of acids, and to acquire and undertake the whole or any part of the business, property, and liabilities of any company carrying on any business which this company is authorised to carry on. The first subscribers (who take one share each) are:—W. Gilchrist, ironfounder, Leadenhall Street, London; T. Hamilton, merchant, 90 Cannon Street, London; T. Greenlee, 25 Victoria Park, London; H. Burn, 2 Tranquil Cottages, Sutton Place, Greenwich; J. Wylie, 37 Mornington Road, Regent's Park, London; W. Gardner, engineer, 45 Leadenhall Street, London; J. J. Fifield, jun., 23 Maze Hill, Greenwich. The first directors are Andrew Lawson Knox Gilchrist, William Gilchrist, and Helen White.

Newport Aërated Water Company (Limited).—Capital 5,000*l*., in 5*l*. shares. Object: To acquire and carry on the business of an aërated and mineral water manufacturer, manufacturer of cordials and hop bitters, &c., now carried on by Samuel Dean at Dock Street and Bridge Street, Newport, Mon., under the style of S. Dean & Co. The first subscribers are:—J. Williams, Waterloo Hotel, Newport, hotel-proprietor, 50 shares; R. T. Mann, Marshes Road, Newport, innkeeper, 50 shares; R. Morgan, High Street, Newport, innkeeper, 30 shares; D. E Humphreys, Talbot Hotel, Newport, hotel proprietor, 10 shares; D. Phillips, Newport, innkeeper, 10 shares; W. Gibbs, Royal Oak Hotel, Newport, hotel-proprietor, 30 shares; and D. Davies, Corn Street, Newport, innkeeper, 15 shares. There shall not be less than three nor more than seven directors, and the first are J. Williams, D. Phillips, R T. Mann, W. Gibbs, R Morgan, and S. Dean. Qualification, 150*l*.; Remuneration to be determined in general meeting. Registered office, 58 Dock Street, Newport, Mon.

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Editorial Comments.

DEFECTS IN THE SALE OF FOOD AND DRUGS ACT.

Dr. Cameron's Bill to amend the Sale of Food and Drugs Act remains in a parlous, or at least in an unprinted, condition. It is understood that Dr. Cameron's object is to make wholesale traders as amenable to the statute as re-

tailers are, and it may be that the doctor finds it not quite so easy as it seemed at first sight to put this intention into the form of a precise legal provision. The Act, as it stands, provides no exemption for wholesale men—recognises, in fact, no distinction. But the difficulty lies, as Captain Cuttle used to say the point did, in the application. To go into a retail store and buy an ounce or two of something, and having bought it to fulfil the formalities of the Act, is all plain sailing; but this procedure is altogether unusual, and could hardly be carried through, in regard to wholesale transactions. An influential deputation of grocers, representing the Federation of Grocers' Associations, waited on the President of the Local Government Board last week, with the view of enlisting, if possible, his sympathy and securing the support of the Government for an amendment of the law in the direction aimed at in Dr. Cameron's Bill, and also in other respects. Mr. Ritchie does not seem to have acquired the art of handling a deputation with the grace which characterises some of his colleagues. He not only sent this one empty away, but he irritated his visitors into the bargain. He scarcely gave them an opportunity of explaining their grievances one by one before falling on each sharply and almost contemptuously, though, perhaps, generally logically. The grocers asked, first, for a provision such as is adopted in the Margarine Act, making the invoice in all cases a warranty within the meaning of the 25th section of the 1875 Act. This would, of course, carry out the intention of Dr. Cameron's Bill easily enough for the retailers, but it might prove almost too sweeping in action. It would tend to make the wholesaler responsible in almost every case. As Mr. Ritchie at once pointed out, there was the great distinction between the Margarine and the Sale of Food and Drugs Acts that in the former only one article is concerned, while the latter applies to innumerable substances, many of them indefinite in composition and not always certainly identifiable by a commercial name. To perfect the application of the Act to the wholesale trade, the grocers asked also for a provision converting an action against a retail vendor into one against the party who had given the warranty, or whose invoice was a warranty; and they further requested a provision enabling inspectors to take samples from wholesale dealers more easily than they could do under present circumstances. They did not lay down their idea of the procedure to be adopted to accomplish these purposes; perhaps Dr. Cameron's Bill will indicate this. Another proposal made by the Grocers' Federation is that it shall be compulsory on justices, and not optional, as at present, on the demand of either party, to refer an analysis to Somerset House. This seems to be a reasonable requirement.

The deputation had their principal wrangle with Mr. Ritchie in regard to margarine. It appears that they prefer to be prosecuted under the Margarine Act rather than under the older statute. And there is certainly something in their intention that it was intended by the later Act to transfer all prosecutions for the sale of margarine as butter. Mr. Ritchie says this was not so, and the local authorities, it appears, find it easier to get convictions under the Sale of Food and Drugs Act than under the Margarine Act. Customers want margarine, say the grocers, but they will only ask for it as butter. If the article is properly labelled that suffices under the Margarine Act; but the customer has to be forced into pronouncing a word which he or she dislikes, or a vendor may commit an offence under the Sale of Food and Drugs Act. Mr. Ritchie refuses to recognise any grievance in this matter, and rather indignantly rejects the suggestion that his department might issue a circular advising local authorities which Act to employ.

One other amendment asked for by the grocers is that a standard limit should be fixed by statute to the proportion of chicory which may be mixed with coffee without making the mixture "fraudulent" in the view of magistrates. At present there have been judgments against the vendor in respect of a mixture containing 60 per cent. of coffee, and in his favour in regard to a mixture containing 72 per cent. of chicory.

Whenever the Act comes to be amended there are one or two points beyond those raised by the grocers, which certainly deserve the attention of Parliament. The injustice of always saddling the defendant with his costs when he has succeeded in fully satisfying a Court of his innocence, and perhaps of the frivolous character of the charge brought against him, is obvious; and yet it is extremely rare to find any magistrate allow the defendant any portion of the expense to which he has been put in consequence, probably, of the demonstrated ignorance of the analyst. There should also be some means provided for obtaining at the public cost High Court decisions on points of law which may arise and which in the magistrate's opinion demand an authoritative settlement. It is monstrous that such pronouncements should have to be obtained at the expense of a poor tradesman or not at all. We are inclined to advocate, too, some veto on prosecutions, so as to prevent the ridiculous repetition of the task of demolishing analysts' fads in relation to substances such as milk of sulphur, and the prevention of prosecutions of tradesmen who may have sold, it may be, as carbolic acid something other than pure phenol. Lastly, the amending Act might give to the Local Government Board the power, which it professes not at present to possess, of requiring from county authorities and analysts such details of the working of the Act in their several districts as shall enable the department to publish in its annual report statistics which may have some approach to accuracy, or else of suppressing the reports altogether.

It should be scarcely necessary to add that we do not sympathise in any degree with what we understand Professor Wanklyn to urge—namely, the substitution of a Board of Analysts for the Inland Revenue Laboratory as referees. Not at all: the Somerset House chemists simply saved the Act which the eager analysts nearly wrecked when it first came into operation, and neither prosecutors nor defendants have had any substantial reason to complain of them as umpires during the sixteen years that they have exercised their functions in this respect.

STATE PHARMACIES IN GERMANY.

GERMAN PHARMACY was on its trial in the Reichstag on Wednesday, March 2, the greater part of the sitting being devoted to the discussion of a motion, brought forward by the Social Democratic party, in favour of the nationalisation of pharmacies. A similar motion was discussed and rejected last session, and the proposal fared no better on the present occasion; but the determination of the Socialists—who have now made State pharmacies a minor plank in their official platform—not to let the matter rest must be irritating to our quasi-monopolist German colleagues. The views of the Social Democratic party were ably expounded by its leader, Mr. Bebel, who had evidently been supplied with many telling facts by pharmacists behind the scenes—probably (as the *Pharmaceutische Zeitung* somewhat superfluously observes) by men not in business on their own account. When, after the war, the German "concessions" were introduced in Alsace-Lorraine, the value of pharmacies in those provinces suddenly trebled—a proof, Mr. Bebel thought, of the nefarious influence of the protective system. The Social Democrats,

continued the Deputy, wanted the State to acquire the pharmacies of the Empire, and dispense at cost price to the public through the intermediary of properly qualified pharmacists, who would be salaried State officers. In 1879 Professor Virchow had declared himself distinctly in favour of the nationalisation of pharmacies, and since then the evils connected with the system had become more acute. As a result of the monopoly which placed the exclusive right of dispensing in the hands of 4,600 apothekers, the sale-value of businesses had increased enormously, and an organised system of speculation in pharmacies had sprung up. Statistics showed that no class of business in the Empire changed hands more often than apothekers' shops. Their possession, owing to the enormous prices paid for concessions (based, as a rule, upon the assumption that the profits average 200 per cent. on the cost price of the goods), had become possible only to the capitalist, and the great majority of assistants had no chance whatever to become independent. The manner in which assistants and apprentices are sweated by the apothekers Mr. Bebel denounced as disgraceful, and he added that several cases of fatal dispensing errors could be traced to the systematic overworking of employés. As the majority of the licenses were merely personal—*i.e.*, not vested in the shop itself—it would be an easy matter for the State to refuse to grant others in their stead when they lapsed, upon the death or retirement of the present holders. The Socialists, it should be observed, in spite of their reputed propensity for spoliation, do not propose to dispossess the present licensees. They merely ask that no further licences shall be given to individuals, and they even go so far as to admit that, if State-pharmacies should be found to work so well that it would appear desirable to nationalise all the shops at once, a fair compensation must be paid to the holders of the concessions.

The allegations of the Socialist leader were replied to by Dr. Friedrich Witte, the Progressist deputy for Rostock, in whom the German pharmacists and the drug trade in general have a zealous and practised champion. Mr. Witte was once a pharmacist himself, but he relinquished that profession 30 years ago to start business as a wholesale and manufacturing chemist, and is still engaged in that capacity. Mr. Witte denied that the average profits of the apotheker were as large as had been stated, and mentioned, in support of that assertion, that of the 4 630 apothekers in Germany 1,266 kept no assistants at all, 1,919 only one, 915 two, and only 580 three or more assistants. If the apotheker were really the capitalist and hoarder he is said to be, how is it that in so many instances he does not enjoy the luxury of even a single assistant? Mr. Witte then charged the Socialists with not knowing their own minds, for whilst, four years ago, they were in favour of the acquisition of pharmacies by local authorities, they now want the State to become the owner. At the same time the speaker urged the Government to take in hand the reform of the pharmacy laws, proposals for which had been hanging fire for fifteen years. State-Secretary von Bötticher declared that he thought the nationalisation of pharmacies "hardly practicable," because the necessary organisation to work them by Government was not available. He then went into a review of the present state of the pharmacy laws, and threw the blame for their admittedly unsatisfactory condition upon the local legislatures. In 1877 the various State-governments endeavoured to devise a scheme for the unification of the pharmacy laws of all the German States. The Imperial Government then submitted for consideration two projects, the one based upon personal concession and the other upon concession vested in the premises. The idea of doing away with the concession-system altogether never seems to have been entertained at all. But the State-governments could not agree among themselves, both schemes fell through, and each State kept to its own laws, all looking forward to the good time—which is now as remote as ever—when the matter shall again be taken in hand with a determination to carry it to a solution. Another Social Democrat, Mr. Emanuel Wurm, deputy for Gera, and an old professional chemist, closed the debate with a general onslaught upon the morality and probity of pharmacists as a class. With regard to the concession-system, he pointed out that only 40 per cent. of the now existing pharmacies had licences vested in the premises, the remaining licences were all personal ones, and favouritism and backstairs influence with officials prevailed to such an extent that, in opposition to the spirit of the law, the personal licences were continually transmuted into property-licences upon the death of their holders. State pharmacies would not be innovations, inasmuch as in Brunswick they existed in the eighteenth century.

No vote was taken upon the proposal, as one of the members, at the end of the debate, pointed out that the number of deputies present (167) was insufficient to take a legal decision. Had the motion been carried to a division there is little doubt that it would have been rejected by a great majority, and for the present, therefore, the German pharmacy proprietors are safe. But the tenacity with which their position is attacked year by year, and the admitted defects of the present system, may well give them cause for uneasiness. The *Pharmaceutische Zeitung*—which, by the way, though it reports State-Secretary von Bötticher's speech verbatim, almost entirely ignores the arguments of the Social Democrats—betrays that alarm by calling March 2 a "*dies nefas* for German pharmacy."

Threatened institutions are proverbially long-lived, and, when the first shock is over, the German apothekers will probably continue to go on with their business without much thought of to-morrow. But the circumstance that, as a class, they should be constantly exposed to unpleasant, if not damaging, attacks in the German Parliament, brings out clearly their disadvantage of being, in a measure, identified with a Government monopoly. Worse than this—the lukewarm defence of the prevailing state of things by Minister von Bötticher, and the ominous expression "hardly practicable," which he allowed to fall from his lips when referring to State pharmacies, as if implying that, given the provision of the necessary organisation, there was no reason why the Government should not approach the proposal in the same open frame of mind with which, some years ago, they conceived and accepted the nationalisation of the railways, bodes ill for the future of protected pharmacy. After all, State socialism is the order of the day in Germany, and if State railways, State mines, and State pensions, why not State pharmacies? Why, indeed, not go the whole length of the logical hog straight away by communising the baker, dressing the butcher in an official uniform and peaked helmet, and having duly examined and trained State milliners gratuitously dispensing bonnets of officially-approved pattern, and no other, to citizenesses upon presentation of an officially stamped order from the State Ministry of Public Attire?

PHARMACY IN THE NORTH-WEST TERRITORIES.

THE Legislative Assembly of the North-West Territories of Canada has passed a Pharmacy Act, or Ordinance, which was assented to by the Lieutenant-Governor on January 25. Under this Act the administration of pharmacy in the Territories is entrusted to the Pharmaceutical Association,

which is accordingly incorporated, and a large number of the sections of the Act are devoted to instructions in regard to the election of the Council of the Association. The Ordinance provides that the dispensing of physicians' prescriptions and the sale of poisons shall only be done by pharmaceutical chemists, the rights of those at present in the drug trade, and of physicians and veterinary surgeons, being reserved. The provisions in regard to the sale of poisons are similar to those in force in other divisions of Canada, but there are a few points which are decidedly interesting, if not distinctly novel. Thus, any person who is prosecuted for violation of the Ordinance must prove that he is entitled to keep open shop, &c, the certificate of the Registrar under the seal of the Association being the proof By most Pharmacy Acts the prosecution is compelled to prove their case, and in the North-West Territories this good practice will doubtless continue. But there is a clause in the Ordinance which is wide enough to allow anyone to make a business of prosecuting, as it gives "one moiety of the fine to the prosecutor and the other to the general fund of the North-West Territories." The Act also provides that "No person selling articles in violation of the provisions of the Ordinance shall recover any charge in respect thereof in any court of law or equity, nor shall any branch drug business be carried on by a pharmaceutical chemist unless he employs in it a duly registered pharmaceutical chemist." The principle of the first part of this clause is sound, and, if it is well looked after and strictly enforced it should become a more potent factor for keeping the practice of pharmacy in the Territories within the four corners of the law than the hundred-dollar fines. Human nature seldom permits a man to face the threat of non-payment of a few shillings' worth of goods supplied, although he may become callous about the probable infliction of a hundred-dollar fine. Another serious consequence of the violation of the Ordinance by any registered person is that, if convicted, the Council of the Association is empowered to recommend the removal of the name of the person from the register with the consent of the Lieutenant-Governor. The Ordinance provides for the institution of a qualifying examination, the subjects being the same as the British "Minor." Candidates must show that they have served four years in a drug-store, but they are not required to pass a preliminary examination, nor is any examination for assistants authorised by the Act. Persons who pass the examination are entitled to be registered as "Licentiate Pharmaceutical Chemists," which title also covers "Chemist and Druggist," "Druggist," "Pharmacist," "Apothecary," and "Dispensing Chemist (Druggist)," but, strange to say, "Pharmacentist" is not included, and there is no saving clause such as "the use of any title which shall imply registration under the Ordinance." Persons entitled to registration without examination are those who have "been engaged in the actual practice or profession of chemists and druggists, as clerk or manager, for at least four years before the passing of the Ordinance." One of the years must have been spent in the Territories. "Any person possessing a diploma or certificate of admission to practise as a pharmaceutical chemist in any part of Her Majesty's Dominions, or by any pharmaceutical association or college of pharmacy empowered by law to grant such diploma," will be entitled to registration. It is a pity that the conditions existing in the old country were not more closely studied when this clause was drawn up. As it stands it excludes all chemists and druggists of Great Britain, although their qualifications are higher than the Association is likely to require. Probably the Registrar of the Association will take a liberal view of the clause, and admit anyone holding the Minor certificate; certainly an early opportunity should be taken of rectifying what we presume to have been a slip of the draftsman, in an otherwise carefully-expressed statute.

COMMENTARY.

New Line for Chemists.—The following advertisement is cut from the *Bazaar* of February 19:—

> Latin prescriptions translated into English, 2*s*. 6*d*. Wilson, chemist, 73 Gillott Road, Birmingham.

Who says a classical education is of no pecuniary value?

Lead in Aerated Waters.—It is worth bearing in mind that the lead which is sometimes found in aërated waters may come from something else than the citric acid and apparatus. What analysts put down as "lead," may be something else, and it may come from the essential oils used for flavouring the beverages. Quite recently Hirschsohn has found lead in eleven out of a dozen samples of Chinese oil of cassia, the contamination arising from the bottles in which it is exported. There is no oil which takes up copper so readily as essence of lemon, and to this source of metallic contamination essence-makers may turn their attention with advantage. It would be a great improvement if all essential oils were exported in glass bottles.

How to Open a Shop.—The old circular "to the nobility, clergy, gentry, and inhabitants of the vicinity" is obviously played out. The "well-known cash chemists of London, Leeds, Bradford, &c.," are opening a new shop in Leeds with a dispensing department "replete with every requisite," including a fully-qualified chemist, and they advertise that they will celebrate the occasion by giving away 10*l*. Competitors are to make two words out of the following "puzzle":—"A 4 Tune." The 4 tune 8 sender of the first correct answer is to have 2*l* 2*s*., and other prizes are graded down to a 1*s*. bottle of perfume. Competitors are to pay 1*s* entrance-fee, for which they are to get a coupon entitling them to ½ lb. of tea. The inventor of this scheme is, we believe, willing to accept a Discoverership in Pharmacy if the Pharmaceutical Council would like to fit it on him.

Prices in U.S.A.—It is difficult for the average English druggist to imagine that the average American druggist has to face lower prices than are obtained in England. We have a very good example in a short note read recently to the Philadelphia College of Pharmacy by Mr. F. W. Hanssmann. It was on "Commercial Extract of Vanilla," and the writer remarked that "at the present day a good quality of vanilla-bean cannot be bought under $7 or $8 per lb., and, calculating on this basis, the price of one pint [16 oz] of tinctura vanillæ, U.S.P. [1 in 10], comes to little less than $1. To sell over the counter and obtain a reasonable profit would compel the pharmacist to demand for this extract at least 10c. per oz., which, with the prominence of the 'grocery-store' vanilla, is almost impossible." Now, in the good old days when stores were not, there was no difficulty in getting here 1*s*. an oz. for good essence of vanilla; and even now a desperate North London cutter quotes it 6*d*. per oz, which, no doubt, is a 1-in-20 preparation. We have still a margin to wipe out before we reach "rock bottom."

Is Pure KOH Possible?—One of the late Professor Dittmar's last papers was on metal vessels for laboratory use, and in this he made special comment upon the purity of potassium hydrate, pointing out that the current idea that gold and silver vessels are unaffected by caustic alkali is erroneous; it may be true for caustic soda, but is not for caustic potash. The reason why the "Kalium hydricum

purissimum" of Trommsdorff or Merck is quite white is that it contains more water than corresponds to the formula KOH. On attempting to de-hydrate it by fusion in a silver dish, oxygen is absorbed from the air, and the silver dish is attacked immediately a certain point is passed; the material cannot, therefore, be at once anhydrous and pure. A similar result is obtained when gold alloyed with 10 per cent. of silver is used. The purest caustic potash that Professor Dittmar was able to prepare contained potassium carbonate and water, as well as a trace of gold (0 1 per cent.) sufficient to give it a dark-brown colour. Professor Dittmar hoped to give KOH a real existence, but that now, unhappily, is a task reserved for another.

FERMENTATION.

THE fourth, and last, of the special series of lectures which Professor Armstrong has been giving the Pharmaceutical Society was delivered on Wednesday evening to a fair audience. After stating the conclusions arrived at in the previous lecture, in regard to enzymic fermentation being an action of simple hydrolysis, he remarked that the change of sugar into glucose takes place much more rapidly than the change of the latter into alcohol by yeast, and there is no doubt that, in the first stage, the sugar-solution passes through the cell. A striking example of the re-arrangement of the atoms of the molecule, supporting Bäyer's theory, was shown in the conversion of glucose into levulinic acid by nitric acid. In this the H and O atoms simply reverse their positions. As explained in the last lecture, this rearrangement, Professor Armstrong believes, is similar to what takes place in electrolysis, and this explanation neatly fills in the gap left by Bäyer. He next proceeded to show that these changes are accompanied with degradation of energy. Enzymic fermentation is a simplification or purely analytic process; the molecule of sugar is split up into simpler substances, the sum of which is the original substance—sugar. Not so in the bacterial fermentation. This is not so simple; indeed, it appears to be a synthetic process. For example, lactic acid acted upon by bacteria is converted into two more complex bodies (butyric and caproic acids) and a simpler one (acetic acid). How is this to be explained? Well, in the first place, it is to be noted that bacterial fermentation is always associated with the evolution of hydrogen. There are analogues to the condition in non-vital decompositions—that, for example, in which sodium amalgam is made to react upon aldehyde with the formation of aldol. Aldehyde forms with water a hydrate of the chloral-hydrate type; this is the condition in which it exists in the solution, and the nascent hydrogen from the action of the sodium amalgam takes the place of an H.OH group in the aldehyde hydrate molecule, aldol being the result. So in the case of bacteria. But it must be noted that the main influence of bacteria on fermentable substances is that they bring such a reorganisation in the molecular structure of the substances that the constituent atomic groups react of themselves: there is such shifting of the groups and atoms during this process that more complicated bodies are the result. We are to regard the higher alcohols formed in the fermentation of sugar by yeast as products of such changes. The yeast does not produce them, but the bacteria which always accompany yeast Necessarily, the carbon atoms, as well as the hydrogen and oxygen atoms, must also be capable of shifting That is true of bacterial fermentation, and we have the non-vital analogue in the formation of saccharins, such as lactone, by the action of lime on glucose.

In the next section of his lecture, beginning with the manufacture of vinegar through the influence of *Bacterium aceti* upon weak alcohol, Professor Armstrong gradually led up to the influence of micro-organisms in producing zymotic diseases. Thus in regard to the vinegar organism he pointed out its property of taking up atmospheric oxygen and putting it into ethyl alcohol. Here the action is precisely the same as that of platinum black, but the *Bacterium aceti* does not give the oxygen to everything; it will not give it to methyl alcohol, for example—in fact, it has a selective characteristic. This point was returned to after the great class of fermentations of a putrefactive character had been dealt with. Of these we know comparatively little, because we are ignorant of the composition of the substances fermented (albuminoids). Professor Armstrong thinks that the products of putrefaction are not the primary products, but are the result of the action of bacterial hydrogen upon those re-arranged constituent groups which have been mentioned. Whatever the changes may be, this we know—that the highly-poisonous animal alkaloids (ptomaines) are simultaneously produced, and these for a long time were regarded as the poisons which produce zymotic diseases. In accepting that belief we seem to have taken hold of the wrong end of the stick, for latterly the opinion has obtained support that bodies of the peptone class are the sinners. At this point the lecturer focussed the chief points in the doctrines which he had expounded upon the problem of immunity, suggesting that the selective property exhibited by *Bacterium aceti* is probably an analogue of the conditions we have wherein some persons take a disease and others do not. A somewhat similar explanation was given of the action of preventative inoculations, the lecturer illustrating his point by reference to the optical properties of asymmetrical bodies, optically active and inactive tartaric acids affording the necessary analogue. May it not be, he theorised, that the vaccines so alter the composition of the tissues that the bacterial poisons, whatever they are, are incompatible with the tissues? This is a line of research from which much may be expected in the future, and in his concluding sentences Professor Armstrong explained that that really was the object of his lectures. He had not intended to speak of fermentation in a scholastic fashion, but to show what remains to be done, and he thought that he could not have spoken in a more appropriate place, since only there was an English school of research instituted such as could follow up the subject.

In appreciative and exceedingly neat speeches Mr. Carteighe and Professor Green proposed a vote of thanks to Professor Armstrong, which was heartily accorded.

DEED OF ARRANGEMENT.

The following deed of arrangement with creditors has been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act making any of these arrangements binding upon dissenting creditors.

Irwin, Thomas Saville, Snettisham, chemist and druggist. Trustee: Thomas William Smith, Opie Street, Norwich, accountant. Dated February 29; filed March 3. Unsecured liabilities, 107*l* 6*s*. 4*d*.; estimated net assets, 66*l*. The following are scheduled as creditors:—

	£	s.	d.
Hewey, Margetts, Snettisham	10	0	0
Smith & Sons, Norwich	49	0	0
Walkers, Troke & Co., London	15	0	0

(And 24 under 10*l*.)

Emeritus Professor Redwood.

DR. THEOPHILUS REDWOOD, Emeritus Professor of Chemistry and Pharmacy to the Pharmaceutical Society of Great Britain, died on Saturday last, March 5, at his Welsh home, Boverton, Glamorganshire, in the house where he was born eighty-six years and five days previously.

Dr. Redwood was in London about last Christmas-time. He was fairly well then, though he paid a professional visit to his old friend and medical adviser, Sir Richard Quain. The genial doctor's advice to him was to take care of himself; but it would seem that the now historic fog, which Londoners will for many years associate with the Christmas of 1891, was the primary cause of the last illness of the honoured teacher and friend of so many living British pharmacists. He went back to Wales with a bronchial cold, and though not apparently seriously ill till a short time before his death, he got slowly worse, and latterly the local doctors diagnosed either cancer or ulceration of the coats of the stomach. Up to almost the last he was calmly giving directions about work to be done.

Dr. Redwood was very fond of his home at Boverton. It was a small estate belonging to his father, and was where he passed his boyhood. It came into his possession after the death of an elder brother, and for many years the Professor turned thither every summer vacation. His wife died there in 1868, and on Saturday he will be buried beside her in Llantwit Major Churchyard. During the last two or three years he has spent the greater part of his time at Boverton, paying only occasional visits to London when important business required his attention at his laboratory. He had a little laboratory at his home; but his hobby at Boverton was to make improvements on his estate—gardening and such other country work as came in his way—for others as well as for himself. He was well known, and much loved and respected by his neighbours, poor and rich, for many miles round—his helpfulness and his unvarying kindness being often called into requisition.

Dr. Redwood was first introduced to the drug trade at Cardiff, and in that same town last August he appeared before pharmacists for the last time. His son tells us that he believes that occasion was the last on which the Professor took part in any public function of any kind. Very hearty indeed was the reception given to him when he stepped forward to second the vote of thanks to the President for his address. "His tongue has not lost its fluency, although his eye is not so sharp as of old, and it was honour enough for any man to have such praise bestowed upon him as our Nestor gave Mr. Martindale for his address." Thus wrote our reporter at the time, and all who heard the speech will recall the happy vein of humour which ran through it. It was just seventy years ago, said the speaker, that he commenced his pharmaceutical studies in that town. He had a claim, therefore, to look upon himself as a Cardiff pharmacist. In those seventy years, he reminded his audience, Cardiff had grown from a little town with four or five thousand inhabitants, with neither docks nor railroads, to the great busy place with its 128,000 inhabitants, and its vast docks and industries.

Young Redwood went to the shop of his brother-in-law, Mr. Charles Vachell, who did a large general trade and also practised as an apothecary. The first duty to which the young novice was called was to assist in removing the finger of a lad who had had an accident with some machinery. A week later—it was market-day, and nobody else could be spared—he was sent out to bleed a man who had been injured by a fall from his horse. He had seen some bleeding performed in the first week of his pupilage, and his master showed him how to conduct the operation by performing it on a cabbage-leaf, and told him to be sure and assume plenty of confidence. The bleeding was successfully performed, and the young operator's surgeonship was afterwards often called into requisition.

Some three years later a Quaker lady who knew John Bell, of Oxford Street, was staying at the house of young Redwood's father, and through her influence

an opening was made for him in that celebrated pharmacy. How he went through all the departments of that business has been told before, and need not be here repeated. One event, however, may be mentioned, as it illustrates the many-sidedness of the subject of this memoir. Some four or five years after he had entered the house, and when he had arrived at the principal-dispenser counter, it was found necessary to enlarge the pharmacy. The firm offered a premium for the plan which should be approved by them for enlarging and remodelling the shop, and all in the place, partners and assistants, were invited to compete. Many drawings were sent in, but the one which received the prize was Redwood's. His design was approved in every detail, and though it involved some structural alterations, these were carried out exactly as described, and the shop as it now exists is almost the same as that which young Redwood planned.

While he was engaged in the business of John Bell & Co., the son of the chief, Jacob Bell, came into the establishment. Jacob Bell was four years younger than Redwood, and he had the sense to take him as his guide and instructor in pharmaceutical matters.

Redwood left Oxford Street, and established a business of his own in Crawford Street. There he fitted up a small factory, and began the manufacture of some chemical and pharmaceutical products, devoting especial attention to the perfection of the preparation of extracts *in vacuo*. His business subsequently passed into the hands of Mr. Thomas Biggs, to whom succeeded Mr. Frederick Curtis, who removed it to Baker Street, and whose successors, Messrs. Jameson & Son, are the present proprietors.

In 1841, Jacob Bell commenced the organisation of the Pharmaceutical Society, and from that date till Mr. Bell's death, in 1859, Mr. Redwood was the thoughtful, painstaking, wise, but singularly unobtrusive supporter of the enterprise to elevate the status of the British chemist and druggist. Through those years Mr. Redwood was the organiser of the Society's scientific, and, to a great extent, of its educational work. Last April we published some Jubilee reminiscences, from Mr. Joseph Ince, who related an incident which Mr. Bell had told him, and which showed how the scientific work of the Society was done in its early days. There had been excellent evening meetings, good papers were read, important processes explained, and there were several able men who could be relied upon to discuss whatever was brought forward. The Council appointed a committee to provide for the evening meetings, but Professor Redwood, as the scientific officer of the Society, communicated all papers. There arose complaints that Professor Redwood was too much in evidence, and Mr. Bell, always anxious to encourage everyone to take part in the common work, stepped into the background, and took the Professor with him. The entire control of the evening meetings was handed over to the committee, and when the session of 1851–52 opened there was no paper and no suggestion, and October, 1851, is a blank in the official records. Mr. Bell and Professor Redwood were requested to resume their original positions.

Mr. Redwood was appointed Professor of Pharmacy to the Society when the school was first founded, and when Mr. Fownes resigned, on account of ill-health, the Chair of Chemistry was united with that of chemistry. The laboratory, which was the first in this country specially arranged for giving practical instruction in chemistry and pharmacy, was planned from Professor Redwood's designs. The College of Chemistry, under Dr. Hoffmann, and the Birkbeck Laboratory at University College, under Professor Fownes, followed soon afterwards, the latter of these being constructed on the same principle as that of the one in Bloomsbury Square.

Professor Redwood was for many years Secretary of the Chemical Society, and also of the Cavendish Society. His degree of Ph.D. was conferred upon him by the University of Giessen, at the special request of Liebig when he was resigning his professorship at that institution.

In 1847 Professor Redwood edited and partly re-wrote a new edition of Gray's Supplement to the Pharmacopœia. In 1849 a further edition was produced, and as by this time there was scarcely any of the original left, it appeared as Redwood's Supplement. Subsequently he edited and adapted for English readers a work on practical pharmacy, which was published as "Mohr and Redwood's Practical Pharmacy." A great part of the English edition was new matter written by Professor Redwood. Another important literary work which he undertook was the re-casting of Pereira's "Materia Medica." This work was done in collaboration with his colleague Professor Bentley. He assisted Mr. Bell to found the *Pharmaceutical Journal*, and to conduct it until that gentleman's death in 1859. From 1859 to 1870 Professor Redwood was himself the chief editor. When the first British Pharmacopœia was published, in 1864, it was found so unsatisfactory that the Medical Council was obliged to call in the aid of some pharmaceutical experts. Dr. Redwood and Mr. Warington, of the Apothecaries' Hall, were engaged to prepare a new edition, but the work devolved principally on the former, in consequence of the declining health of his coadjutor. He was also the pharmaceutical editor of the Pharmacopœia of 1885. Of the original work which he did in pharmaceutical chemistry, it is impossible to write in narrow limits.

For fulness of knowledge on pharmaceutical matters Dr. Redwood had, perhaps, no equal in this country. He was never forward in "showing off" the knowledge which he possessed; but when, on a few occasions, he had to reply to attacks on the Pharmacopœia, and when, as President of the British Pharmaceutical Conference, he had to comment on a variety of topics, some of which were raised unexpectedly, his astonishing acquaintance with the whole range of pharmacology often surprised his audience. When he had to speak in public he was generally very deliberate, but always very clear, and his words were always exactly the correct ones. But when he had to reply to an attack on his work, he was at his very best. His language was just as carefully chosen, and, we believe, he never said an unkind word of any of his critics. But he could put an amount of fire and energy into his speech which was apt to electrify those who had only known him in the lecture-theatre.

Dr. Redwood was married in 1845 to Charlotte Elizabeth, the eldest daughter of the late Mr. T. N. R. Morson, but he had the great misfortune to lose her in 1868 after a long illness. He leaves six sons and two daughters. A younger sister of his wife, the widow of his half-brother, kept house for him at Boverton, and was with him at his death.

Dr. Redwood was public analyst for the county of Middlesex, for the London districts of Holborn and St. Giles, and for the borough of Luton. His son, Mr. T. Horne Redwood, F.I.C., and Mr. A. J. de Bailes, F.I.C., were partners with him.

The Redwood Scholarship founded in his honour by a general subscription some six years, when he retired from the active duties of his professorship, will after the present session be appropriately associated with the Research Laboratory. We may mention that so long ago as 1850 about a hundred of his pupils presented him with a costly service of plate as an expression of their gratitude to him as a teacher.

In June, 1890, Dr. Redwood was elected a member of the Llantwit-Major School Board, and subsequently occupied the position of chairman of that body, with credit to himself

and honour to the board. All business matters coming before him received careful consideration; his discernment was so acute that rarely was his judgment at fault, and his colleagues had in him such implicit confidence that his views were always unanimously upheld.

To the majority of those who read this tribute Dr. Redwood has always been an old man in years, though as young as the youngest in thought, in quickness of apprehension, in debate, and in cordiality. From his earliest days to his latest he seemed absolutely free from prejudices. Closely associated as he was with the Pharmaceutical Society, he was so perfectly free from the cliquism which is paramount there that he scarcely seemed to be one of them; he was, too, curiously unofficial. We have often had occasion to ask him for information, and never remember to have found him in the slightest degree reticent or mysterious. What he told he told frankly, and we were at liberty to publish all or half or none, as we pleased. Probably he knew exactly what to keep back, but he always seemed to be telling all he could think of in connection with the subject on which he was questioned.

The portrait which we are able to publish of the late Professor is copied from a beautiful photograph taken on his visit last Christmastide by Mr. Van der Weyde, of Regent Street, who, we think many of Dr. Redwood's old pupils and friends will be glad to know, is able to supply an enlarged copy.

THE RISE AND PROGRESS OF THE PUBLIC ANALYST IN ENGLAND.

By J. A. WANKLYN.

THE public analyst owes his existence to the operation of very general causes, and in a sense is of no country in particular. He is not confined to England, and is to be found in English-speaking countries—in the United States and in Australia; and in France there is his foreign representative, for whose benefit some of our standard works relating to his peculiar province have been translated into French.

The particular causes which precipitated the passing of the 1872 "Adulteration of Food Act," which at once called into being the English public analyst, were to a great extent local, accidental, and individual in character.

In 1872 the influence of the *Lancet* raid on adulteration had not exhausted itself, and the year before that had witnessed Mr. John Gamgee's heroic effort in the *Milk Journal*, which, starting in January, 1871, presently began to publish a monthly list of vendors of deteriorated milk, giving names and addresses, together with the analyses of the milk as sold in London. The conclusion boldly placed by Mr. Gamgee before the British public was in point of fact this —that the skimming and watering of milk was not an occasional practice resorted to by the black sheep of the milk trade, but a very general custom of the trade—a custom followed, in fact, by nine-tenths of the milk trade in London.

Mr. Gamgee's disclosure of the general rottenness of the milk trade in London in 1871 was followed up by Mr. Rowsell's investigation into the "system of supply of provisions for the workhouses of the metropolis," which revealed a most scandalous condition of affairs reflecting the deepest discredit upon a section of the commercial system of the country. Mr. Rowsell's report was not published immediately, but was kept back for a while, and possibly might never have come before the public in its entirety if it had not been moved for by independent members of Parliament.

Under these circumstances the Adulteration Act, 1872–73, was passed, and with the passing of that Act the activity of the English public analyst commenced. My own appointment as public analyst for Buckinghamshire took place under the 1872–73 Act, being one of the earliest under the new order of things. I had, moreover, been employed on the staff of the *Milk Journal*, and had devised the method of chemical analysis by which the work was accomplished, and to me Mr. Rowsell had entrusted the analysis of the workhouse milk, butter, and cheese mentioned in his report.

The 1872 Act was passed in panic and in haste, and was, not unnaturally, defective in many ways; but it worked, and I think I am justified in saying that it worked well. Then came the 1875 Act, which, instead of supplying the deficiencies of the first Act, was in my opinion a retrograde step, blighting the public analyst for a generation. That Act contains a fatal clause, which has already borne the fruit which was anticipated when it was passed. There is a permissive reference of disputed cases to the Somerset House Laboratory.

It was foreseen that the practical effect of the clause would be to degrade the public analyst into a mere underling of the Somerset House Laboratory, and that has in point of fact taken place. The Somerset House Laboratory has for its chief function the protection of the national revenue, which is quite enough to tax its energies to the utmost.

The protection of the public health and of the pockets of the public is a different thing altogether, and ought to be entrusted to an organisation altogether independent of the Excise.

The present position of the public analyst is about as unsatisfactory as possible. He has a position of sham independence, alike unfair to him and to the Excise Laboratory, and it were better that the Excise should be at once saddled with full responsibility, and armed with the necessary authority, than that the present order of things should continue.

Twenty years, the length of time since the passing of the first Act, which called the public analyst into being, is a sufficiently long period to show the working of the legislation designed to restrain adulteration. For many years there was great reason for the complaint that the Act was almost a dead letter, owing to the want of proper machinery for the taking of samples, and it was a not uncommon thing for large districts to have public analysts, and to refrain from calling on them to discharge their functions. I know of an instance where there was a public analyst who was in office for six years, without once receiving a sample for analysis. That, however, is a condition of things which is altering, and there is now an appearance of activity. Last year, for instance, the return for the whole country is that more than 27,000 samples were analysed under the provisions of the Act.

That is a very respectable figure; but when we inquire into the details we find not much reason for congratulation.

Thus, in one of the most important districts we learn that the number of samples dealt with in the year was between 150 and 200. Inquiring what the samples were we find 37 samples of milk (which is to the point); but we find 53 disinfectants, and only 1 solitary sample of bread. We are curious as to the disinfectants. The Act is entitled "Sale of Food and Drugs." We find 15 samples of drugs have been analysed under the Act, and we want to know under what pretext disinfectants are brought under such an Act as the Sale of Food and Drugs Act. The most serious feature is the circumstance that there should be only one solitary sample of bread. It is the play of "Hamlet" with the part of Hamlet left out. The district is the City of London itself.

WINDOW-DRESSING.—To those in the drug trade who have a heavy sundry and oil department the following suggestion by an Alabama correspondent of the *Phar. Record* may be useful:—We do a retail and jobbing business and carry a large stock of lamps, and at this season of the year use our windows for displaying them. A window with shelves upon which all kinds of lamps are placed—viz., parlour, students', vase, Rochester, &c., the top being hung with hall and library lamps—is attractive to a customer during the day and looks beautiful at night when lighted up. The light and lamps suggest to everyone the utility of good light. Anyone passing whose lamp is in any way defective calls to examine, asks questions, looks over our stock, not only in lamps, but toilet-soaps, extracts, combs, hair-brushes, generally making a purchase before leaving if he is in want of an article in our line.

BANKRUPTCY REPORTS.

Re BERNARD WILHELM KÜHN, St. Mary-at-Hill, E.C., Drysalter.

THE adjourned first meeting of the creditors under this failure was held on Thursday before Mr. Hough, Official Receiver. The meeting has been adjourned from time to time to enable the debtor to formulate a scheme of arrangement.

Mr. Ditton now attended on the debtor's behalf and formally submitted the proposal which provides for the payment of a composition of 10*s.* in the pound by four equal instalments extending over ten months. The creditors unanimously entertained the offer, and elected Mr. W. H. Pannell, chartered accountant, 13 Basinghall Street, to act as trustee under the scheme, and to receive and distribute the composition.

The landlord of the premises attended the meeting. He said he had no claim against the estate, no rent being due, but he would like to know his position. The chairman intimated that the usual landlord's privileges would doubtless hold good.

The accounts filed by the debtor show total liabilities 5,583*l.* 16*s.* 11*d.* (unsecured, 2,384*l.* 0*s.* 7*d.*), and assets 1,344*l.* 14*s.* 2*d.*

The public examination of the debtor will be held shortly, and an application will afterwards be made to the Court for approval of the scheme.

Re JOHN EDWARDS, Conway, Chemist and Druggist, and Wine Merchant.

THIS bankrupt came up for his adjourned public examination at the Bangor Bankruptcy Court on Thursday last week. The summary of accounts filed by the debtor disclosed gross liabilities amounting to 9,912*l.*, and a deficiency estimated at 1,785*l.* 11*s.* The debtor alleged his failure to have been caused by keen competition in trade, and losses through managers. He was questioned at considerable length respecting a trust account in which his wife was interested, and eventually the examination was ordered to be further adjourned, in order that he might be able to file certain accounts.

Gazette.

PARTNERSHIPS DISSOLVED.

Britton & Liddell, Harrogate, physicians, surgeons, and general medical practitioners.

Ellis & Stirzaker, Cleckheaton, manufacturing chemists.

Kenny, J. D., and Pillow, H., Treeton and Woodhouse, surgeons.

Rattray & Frost, Frome, surgeons and medical practitioners.

Wright, Layman, & Umney, Southwark Street, S.E., wholesale druggists; as far as regards E. Wright.

Young, C. F., and Widdop, J. I., under the style of C. F. Young & Co., Manchester, chemical-manufacturers; as far as regards J. I. Widdop.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDERS.

Davis, Herbert, Balsall Heath, and Davis, William Allen, Birmingham, trading in Birmingham, drysalters.

Pattrick, George, Thornley, late of Wingate and Hartlepool, chemist, druggist, and wine and spirit merchant.

Williamson, Harry Major Leekenby, Linthwaite, physician and surgeon.

ADJUDICATIONS.

Child, William (in the receiving order described as W. H. Child), Worship Street, E.C., brush-manufacturer.

Davis, Herbert, Balsall Heath, and Davis, William Allen, Birmingham, trading in Birmingham, drysalters.

Pattrick, George, Thornley, late of Wingate and Hartlepool, chemist, druggist, and wine and spirit merchant.

Foreign and Colonial News.

A WHOLESALE DRUG COMPANY, with a share capital of 300,000 roubles, has commenced business in St. Petersburg under the title of Allerhöchst bestätigte Gesellschaft, St. Petersburger Droguisten (St. Petersburg Druggists' Company, under Imperial licence). Messrs. L. L. Gercke, B. M. Schaskolsky, and H. W. Schrader are managing directors.

THE BERLIN RIOTS.—Gebhard's drug warehouse in the Köpenickerstrasse, was attacked and ransacked by rioters during the recent disturbances in Berlin. The shop-windows were smashed, and over 300 marks' worth of goods stolen. In the neighbouring shop of Mr. Kreich, the employés were able to lower the shutters just in time to save the place from damage.

A GERMAN SCIENTIST IN AUSTRALIA.—The German Government have granted a subsidy to Apotheker Finselbach, late assistant in the botanical laboratory of the Geneva University, who leaves Bremerhaven on April 13 for Australia on a scientific tour of investigation of the medicinal and economic plants of Australasia. Northern Queensland, from Maryborough, along the Flinders River, to the Gulf of Carpentaria, will be Mr. Finselbach's principal ground of research.

LOUISIANA SULPHUR-BEDS.—At a recent meeting of the American Institute of Mining Engineers in Baltimore, Dr. H. M. Howe read a paper on "The Copper-mines of Vermont," in which he said: "The promised development of the gigantic sulphur-beds of Louisiana may probably drive iron pyrites out of the market as a source of sulphur for acid-making. This would put the pyrrhotile mines, like those of Vermont, on a par with the pyrite mines as regards sulphur, while, as the pyrrhotile mines are in many cases much richer in copper than the pyrite mines, the former would be the more valuable class."

THREATENING EPIDEMICS FROM RUSSIA.—Serious epidemics are being bred in the famine districts of Russia, and threaten to ravage Russia when the warm weather sets in. In the city of Kazan typhus fever has broken out among the garrison, notwithstanding that the soldiers had been isolated from the rest of the population. All hospitals are overcrowded, and the available medical aid is altogether insufficient to cope with the disease. Ambulances for service in the famine districts, says the Russian medical journal *Wratsch*, are now being equipped in St. Petersburg, and the students of the military school of medicine will also be ordered to proceed to the distressed provinces.

USING OTHER MAKERS' BOTTLES.—Messrs. R. Ellis & Son, of Ruthin, applied in the Chancery Division of the High Court on March 4, before Mr. Justice Stirling, for an injunction to restrain a mineral-water maker at Llandudno from vending mineral water not of the plaintiffs' manufacture in bottles belonging to the plaintiffs, and bearing their name and trade-mark, or from in any manner using the plaintiffs' name or trade-mark in connection with his business. After hearing evidence Mr. Justice Stirling said it seemed to him that there had been a clear and deliberate infringement of the plaintiffs' trade-mark. He did not think the infringement had been accidental, and he found that the defendant had been in the habit of doing this for a number of years and had persevered in it, although his attention was called to it even by his own workmen. It would seem on the evidence that the defendant had found, in two cases, the plaintiffs had been doing the same with his bottles. It did not seem to his Lordship that what was proved with reference to that was such as to disentitle the plaintiffs to an injunction. Of course, if the plaintiffs had deliberately used the bottles of the defendant in the same way as his Lordship was of opinion, on the evidence, the defendant had been using the bottles of the plaintiffs, it would be a defence, but it appeared to him, on the evidence, that the error was purely accidental, and that the plaintiffs were not deprived of the right to come to the Court for an injunction. Injunction ordered with costs.

The Chemist and Druggist SUPPLEMENT

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, MARCH 12, 1892.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

A Copy of this Supplement is inserted in every number issued of "The Chemist & Druggist."

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Advertisements must be prepaid. Remittances by post may be made in stamps, or by postal order made payable to "EDWARD HALSE," and crossed MARTIN'S BANK (LIMITED). To ensure prompt attention address all communications, endorsed "Supplement," to The PUBLISHER of "THE CHEMIST AND DRUGGIST."

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—LONDON (Central).—Old-established middle-class Business; returns about £600; corner shop, double front; house has ten rooms and shop; well-assorted stock and convenient premises; price about £500.

—LONDON SUBURB.—Retail and Dispensing Business; well-fitted shop and comfortable house; returns from business £950 yearly; *exceptionally profitable*; vendor is relinquishing on account of ill-health; investigation permitted; price £850, cash.

—LONDON, W.—Dispensing and Retail Business, situate in a main road; returns £500; *profits good*; comfortable house and well-fitted shop; price £360.

—LONDON, SOUTH.—Retail, Prescribing, and Dispensing Business, situate in a main road; very good-class business; returns about £700 yearly, can easily be increased; very good house, with garden; price required, about a year's return.

—LONDON, S.W.—Small Prescribing Business, situate in a main thoroughfare; held by vendor about 13 years; neatly-fitted shop and comfortable house; about £200 required.

—LONDON, SOUTH.—Dispensing and Retail Business; situate in a busy trade district; average returns about £920; *good profitable trade*; large business premises, well adapted for Wholesale; held on lease; price about £800.

8.—SOMERSET.—Good-class market town; an old-established Business situate in a main street; returns last year nearly £700; profitable work; no heavy trade; comfortable house, and well-fitted shop; large and attractive garden; price £550.

9.—BUCKS.—Light Retail and Dispensing Business, situate in a pretty and attractive locality; returns about £400 yearly; no heavy business; comfortable house; very low rental; good garden, &c.; price about £300.

10.—DEVON.—Unopposed Prescribing and Agricultural Business; returns £500 yearly; *profits good*; well-fitted shop and good stock; rent low; price £350.

11.—NORFOLK.—Good town; Light Retail and Dispensing; capable of being much increased; returns about £500 yearly; well-fitted shop and good stock; about £500 required.

12.—HOME COUNTY (easy distance from London).—Very old-established Business; Agricultural Dispensing, and Retail; returns about £1,250; *profits good*; much more can be done; price about £1,100 valuation if required.

13.—WATERING-PLACE (South).—Good-class Retail and Dispensing Business; returns £700 yearly; well-fitted shop and good stock; principal street; house has 8 or 9 rooms; easily let off if wished; price £550; worth attention.

14.—NORTH OF ENGLAND.—Mixed Business (Drug and Grocery); established over 30 years; returns about £1,700 yearly; *profit about £500 yearly*; several good proprietaries; rent £40; house has private entrance and conveniences; value of stock and fixtures, about £1,280.

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LONDON, W.—Retail; very profitable, nearly all Prescribing; returns £450; price £400.

BUCKINGHAM.—Returns £400; Dispensing and Light Retail; price £300 or valuation.

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WEST OF ENGLAND.—Old-established Retail, Dispensing, and Prescribing business; returns £2,400; net profit £500; low rent on lease; same hands over 20 years; price £1,400.

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SOMERSET (Coast).—Fashionable town; first class Dispensing business in a splendid position; now under management; elegantly-fitted pharmacy, heavily stocked; price £650.

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EXCHANGE COLUMN.

See page 16 (bottom folio)

he Advertisement of Surplus Stock, Formulæ, Addresses Wanted, and Articles Wanted.

isements for the Exchange Column MUST be RECEIVED at the Office by NOON on WEDNESDAYS.

If you have no surplus stock to Advertise just now, keep this Form for future use.

TTISWOODE & Co., New-street Square; and Published at the Office, 42 Cannon Street, in the City of London.—*March* 12, 1892.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected and Translated.

Oil of Stavesacre.

Haensel has determined the amount of fixed oil removable from stavesacre-seed by pressure, and puts it down as .6 per cent. The oil, according to Dieterich, shows the number 75·26 by Hübl's iodine-absorption process.

Morphine Violet.

This is the name which P. Cazeneuve has given to a violet colouring matter which he has made by boiling morphine with para-nitroso dimethyl-aniline in alcoholic solution alkaloids. The colouring matter, of which the free base has the formula—

$$N\begin{cases} C_6H_4N(CH_3)_2 \\ C_{17}H_{18}NO_4 \end{cases}$$

forms an amorpheus mass with a bronze-like lustre; it is sparingly soluble in water, freely so in alcohol, its alcoholic solution being strongly dichroïc; its green-coloured solution in concentrated sulphuric acid becomes successively blue and violet on dilution with water; it dyes silk, wool, and gun-cotton, but is not fast to light.—*J. S. C. I. and Bull. Soc. Chim.*

Constituents of Podophyllum.

Kürsten reports, in a paper in *Archiv der Pharmacie*, that Podwyssotzki's podophyllotoxin is an impure body. But he has obtained a body very physiologically active, and amounting to about 0 2 per cent. of the drug. For this he retains the name podophyllotoxin. The new body is obtained in crystals, which melt at 95° C., the formula being $C_{22}H_{24}O_8 2H_2O$. By oxidation it changes into podophyllic acid, $C_{20}H_{24}O_9$, and carbon dioxide. Kürsten found Podwyssotzki's picropodophyllin to possess the physical properties ascribed to it by him, but with a slightly higher melting-point (227° C.). It has the same empirical formula as podophyllotoxin, as also its molecular weight. The former, however, are comparatively insoluble in the ordinary solvents. They are isomeric, and the only difference is probably in the altered arrangement of some of the methoxy groups.

The Dead Space in Chemical Reactions.

Following up the experiments which we have previously referred to, Liebreich has recently shown that there is a special resisting power near the surface of liquids. Cartesian divers were sunk to a considerable distance below the surface of a vessel containing water, and reacting agents such as chloral hydrate and sodium carbonate. The additional pressure necessary to effect this being then suddenly removed, the diver rose, but could not penetrate the superficial layer, rebounding from it as from a solid wall. Liebreich has also made experiments on the convection of liquids. Solutions of glycerine were employed, a light solution (coloured with azorubin) being allowed to ascend in a heavier. Vessels of various forms were employed, but it always appeared that the coloured liquid never reached the free surface, nor the walls in any capillary space, unless there was subsequent diffusion.

Chestnut-wood Tannin.

American chemists have to be careful in referring to the literature of plant-constituents not to confound different plants which go by the same name. Thus, in the United States, large quantities of extract are made from chestnut-wood and bark, the chestnut being *Castanea vesca* (Linn.). So it happens that all the chemical literature on the chestnut refers to *Æsculus Hippocastanum*. Professor H. Trimble, of the Philadelphia College of Pharmacy, has therefore done good thing in examining the American chestnut, and we observe from his paper communicated to the Franklin Society that the percentage of tannin in the wood is 5·34. The tannin very closely resembles gallo-tannic acid in action—in fact, they cannot be distinguished by the ordinary chemical reagents. The extract of the wood and bark is especially useful in tanning, where it corrects the reddish colour of hemlock, and in dyeing, where it gives a dead black with salts of iron.

Test for Otto of Rose.

According to Panajotow oil of rose-geranium can be detected in otto of rose from the different behaviours of these oils towards a solution of fuchsin decolorised with sulphurous acid. If two or three drops of the oil of rose-geranium are shaken with half a drachm of the fuchsin solution a violet-blue colour is gradually developed, and on standing the colour is quite blue. Otto of rose treated in a similar way gives no such reaction, only a red colour appearing in the course of twenty-four hours. In mixtures of the oils the blue colour always manifests itself more or less strongly, according to the extent of the adulteration. Another simple test is the reaction of sulphuric acid alone. Equal parts of geranium oil and sulphuric acid put in a watch-glass become strongly heated, gives off a tarry smell, and there remains a reddish-brown mass, which on treatment with rectified spirit yields a turbid solution, which separates yellowish fatty flocks, the solution turning red. Otto of rose also yields the reddish-brown residue, but the alcoholic solution is colourless.

Lacquer-trees in Europe.

On his return from Japan, sixteen years ago, Professor Rein, the well-known authority on Japanese art and industry, planted in the Botanical Garden at Frankfort some specimens of the lacquer-tree (*Rhus vernicifera*), from which the Japanese obtain the juice employed in the production of their famous lacquer work. There are now at Frankfort thirty-four healthy specimens of the lacquer-tree, 30 feet high and 2 feet in girth a yard from the ground; and young trees, in a flourishing condition. It seems to be proved, therefore, that the lacquer-tree is capable of being cultivated in Europe, and it only remains to be seen whether the juice is affected by the changed conditions. To ascertain this, Professor Rein has tapped the Frankfort trees, and has sent some of the juice to Japan, where it will be used by Japanese artists in lacquer work, who will report on its fitness for lacquering. In the meantime, samples of the juice taken from the trees at Frankfort, and samples of Japan juice, are being analysed.

Fragrant Plants.

Professor G. L. Goodall, of Harvard University, in his presidential address to the American Association for the Advancement of Science, dealt with some of the possibilities of economic botany, and in speaking of the future of our fragrant plants said we must distinguish between those of commercial value and those of purely horticultural interest. The former will be less and less cultivated in proportion as synthetic chemistry by its manufacture of perfumes replaces the natural by the artificial products; for example, coumarin, vanillin, nerolin, heliotropin, and even oil of wintergreen. When, however, one has seen that the aromatic plants of Australia are almost free from attacks of insects and fungi, and has learned to look on the impregnating substances in some cases as protective against predatory insects and small foes of all kinds, and in others as fungicidal, he is tempted to ask whether all the substances of marked odour which we find in certain groups of plants may not play a similar *rôle*. It is a fact of great interest to the surgeon that in many plants there is associated with the fragrant principle a marked antiseptic or fungicidal quality: conspicuous examples of this are afforded by species of eucalyptus, yielding eucalyptol; styrax, yielding styrone; thymus, yielding thymol. It is interesting to note, too, that some of these most modern antiseptics were important constituents in the balsamic vulneraries of the earliest surgery.

A Vienna doctor declares that cancer can be arrested by the injection of methyl-violet. If aniline dyes will prevent cancer dies, why do people persist in dying of cancer—why not dye with aniline? asks an American paper. It is much cheaper, and is not burdened with a hereafter attachment, "which causes us to shudder and grow sick at heart."

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

THE drug market remains very quiet, and prices, so far as they show any change at all, are mostly towards lower values. Chemicals, however, remain generally steady, especially the heavy alkalies. The following is a summary of the principal changes which have occurred this week.

London. In drugs there has been a considerable advance in oil of lemon, while menthol crystals and Japanese peppermint-oil are also dearer. Raw camphor has been somewhat irregular; at first the market was reported rather easier, but towards the close there seems to be a firmer tendency. China soy is sold at higher prices, and for shipment the recent quotations have been advanced; jalap is firmly held, and from New York comes news of a very strong market for sarsaparilla. Ergot of rye is exceedingly neglected, and much lower prices would have to be accepted in order to induce business; cod-liver oil is offering at very low rates, and there is great competition among the agents; orris-root does not seem to be quite so firm, and, if advices from Italy are to be trusted, a sudden collapse may set in; there has been a decided decline in the value of turmeric owing to heavy arrivals. In fine chemicals citric acid has attracted the most attention—prices are slightly in advance of those quoted last week. The new quotation for phosphoric acid necessitated by the advance in the raw material will probably be published to-morrow. Sulphate of copper is dearer; chlorate of potash, soda crystals, bleaching-powder are all exceedingly firm; sulphur has declined in value, and glycerine also is offering at very low rates; tartaric acid is now cheaper than it has ever been, and cream of tartar is moving downwards in sympathy with it; antimony has somewhat recovered, and quicksilver remains exceedingly firm. In surveying the market for articles allied to the drug trade, we find, in the first place, a very strong advance in chillies and in capsicums; indiarubber is firm, and somewhat higher; Spanish indigo has also advanced. There has been a very strong decline in shellac, but to-day some recovery is perceptible. Cotton-seed oil is rather higher and turpentine lower. Quillaia, sticklac, and gambier may be had for less money. Benzol is also declining, and in spices nutmegs, black and white pepper, pimento, and Cochin ginger are all cheaper. China galls are offering lower for arrival. Gum olibanum is easier, and at to-day's sale of varnish gums kowrie sold at irregular rates, good and fine qualities being from 5*s.* to 10*s.* dearer; common grades, dull and cheaper; fine Borneo copal brought high prices; soft Singapore is quite neglected; Singapore damar is about 4*s.* to 5*s.* lower. The bank-rate remains at 3 per cent.; bar silver is quoted at 41⅜*d.* Bombay and Calcutta exchanges stand at 1*s.* 3$\frac{13}{16}$*d.*, Hongkong at 2*s.* 11*d.*, and Shanghai at 4*s.* 0⅜*d.*

Liverpool. In Liverpool Turkish canary-seed is very firmly held, while Sierra Leone chillies have been in request at a sharp advance. Cochineal and sulphate of copper have also been in better demand and are dearer, while honey, beeswax, and fenugreek seed are selling very well indeed. In castor oil a turn for the better has set in, but the reverse is the case with quillaia.

Germany. From Hamburg comes news of a recovery in crude antimony, tolu balsam, gum elemi, and fine qualities of jalap. There has been a run on lycopodium and Curaçao orange-peel, while senega and beeswax are also dearer; on the other hand, copaiba balsam is falling in price.

America. The New York drug market last week maintained the firmness of tone which has characterised it for some time, and several articles have risen in price, the consumptive demand for all kinds of drugs and chemicals being particularly good. There is again some speculation in quinine, and it is said, upon what ground does not appear, that "considerable confidence is expressed in the belief that pending negotiations will ultimately result in a satisfactory understanding among manufacturers." Citric acid and chlorate of potash have gone up in sympathy with the English market, while cod-liver oil, ergot of rye, and Rochelle salts are lower. Advances are reported in golden seal (of which 15,000 lbs. have been taken for export) and senega roots. Cassia buds have been in active request, and the market is almost cleared. Canada balsam is very firm. Cascara sagrada is said to be rising, with an active demand.

The Alkali Union's Dividend.

The directors of the United Alkali Company have decided that, after writing off all the preliminary expenses and carrying about 200,000*l.* to the reserve fund, the following dividends out of the profits which have accrued from the incorporation of the company to December 31, 1891, be recommended to be paid, viz.:—On the 10*l.* preference shares a dividend of 7*s.* per share, less income-tax, making, with the interim dividend paid in August last, a dividend at the rate of 7 per cent. per annum; on the 10*l.* ordinary shares a dividend of 5*s.* per share, less income-tax, making with the interim dividend paid in August last, a dividend at the rate of 5 per cent. per annum. The ordinary share capital of the Union being 3,000,000*l.*, the directors might have declared 10 per cent. dividend and yet carried 50,000*l.* to the reserve fund. The debenture and preference shareholders will thank them for the caution displayed in the decision to pay 5 per cent. only.

The London Markets.

42 CANNON STREET, E.C., *March* 9.

ACID (CITRIC).—The market has become tighter again. For forward delivery, second half of year, 1*s.* 5½*d.* per lb. is asked, and some business is said to have been done at that figure. On the spot there are buyers at 1*s.* 5*d.*; but no sellers below 1*s.* 5¼*d.* per lb. Concentrated juice is held for 20*l.*

ACID (TARTARIC).—Still declining in price; 11¼*d.* per lb. would now buy foreign crystals. One of the English makers has sold rather large quantities at 12¼*d.* per lb.; other brands are offering at 11½*d.* per lb. At the drysaltery auctions on Tuesday, 53 bags Cape argol sold at 55*s.* to 65*s.* for ordinary red to pinkish grey; and at 81*s.* to 82*s.* for good but rather dusty grey.

ANISE.—Genuine Chinese star anise is scarce, and held for 110*s.* per cwt. On February 4 there was no star anise offering on the spot in China, and for delivery such exorbitant prices were asked that business had become impossible.

ANTIMONY.—Regulus is slightly firmer, and has sold at 45*l.* to 45*l.* 10*s.*, according to brand. The market, however, closes rather quieter again. Crude Japan is reported to have sold lately at 27*l.* on the spot.

ARSENIC is offering at 12*l.* per ton for white powder, landed terms.

BUCHU still continues to arrive freely. The imports this week are 28 packages.

CALABAR BEANS are reported easier from Liverpool, where 75 bags changed hands, at the end of last week, at 2½*d.* per lb.

CAMPHOR (CRUDE).—The last price at which business in Japan camphor is reported was 127*s.* 6*d.* per cwt., on the

spot. This week there has been rather more pressure to sell, and offers are in the market at 127*s* 6*d*. per cwt. for Japan, and 120*s* for China camphor, on the spot. Japan for March/April shipment offers at 115*s*., and for February/March at 117*s*. 6*d*. per cwt., c i f. terms.

CAMPHOR (REFINED).—Fairly steady, at 1*s*. 5½*d*. per lb. net for German, and 1*s*. 7½*d*. to 1*s*. 8½*d*. per lb., usual terms, for English.

CASCARA SAGRADA.—A parcel of 141 bales of fair quality offered at last week's drug sales was all bought in at 27*s*. per cwt.

CINCHONA.—At the bark auctions on Tuesday a heavy supply of bark, including many parcels of old import, was offered for sale. The catalogues comprised—

	Packages		Packages	
Ceylon cinchona	1,231	of which	1,071	were sold
East Indian cinchona . ..	1,669	,,	1,669	,,
West African cinchona ..	48	,,	—	,,
South American cinchona ..	360	,,	348	,,
	3,308		3,088	

No Java bark was offered, the reason being that a consignment which it had been intended to bring forward had gone down while on board of the barge in the Thames. The competition throughout the sales was a very fair one, and prices closed at the equivalent of the last unit, which was 1¼*d* per lb. for good barks. That average was, in fact, frequently exceeded upon this occasion. The assortment was an unusually good one, and contained several fine parcels of red and yellow bark. One catalogue was composed of 472 packages of Neilgberry bark, from Madras, imported a year ago, and which had been offered before when the unit was barely 1*d*. per lb., but was then withdrawn. The following are the approximate quantities of bark purchased by the principal buyers:—

	Lbs.
Agents for the American and Italian works.. ..	158,015
,, Brunswick works	125,824
,, Mannheim and Amsterdam works ..	115,877
,, Frankfort o/M. and Stuttgart works	104,322
,, Auerbach works	82,299
Messrs. Howards & Sons	68,930
Sundry druggists	62,102
Total quantity of bark sold	717,429
Bought in or withdrawn	65,300
Total quantity of bark offered	782,729

It should be well understood that the quantity of bark bought gives no indication of the quinine value represented by it; some firms who buy large quantities of bark often take the poorer lots, while their competitors, who may buy less bulk, secure parcels of higher test.

CEYLON CINCHONA.—*Original*—Red varieties: Ordinary and thin chips and shavings, mixed, 1¾*d*; fair to good bright quilly stem and branch chips, 2*d*. to 2¾*d*. Yellow varieties: Thin branch chips, 2½*d*.; small to good quilly stem and branch chips, 4*d*. to 7*d*.; root from 4¾*d*. to 7¾*d*. per lb. Grey varieties: These were in large supply; very common woody to fair quilly stem and branch chips sold at 1¾*d*. to 3*d*.; good stem chips, 3*d*. to 4*d*.; common to fair shavings, 1¾*d*. to 3*d*.; stem and root mixed, 3*d* to 4*d*.; root, 3¼*d*. per lb. *Renewed*—Red varieties: Stem and branch chips, common to good, 1¾*d*. to 4*d*; fair to fine bright shavings, 3*d*. to 5½*d*.; yellow stem chips, 6¼*d*. to 8*d*. Grey varieties: Ordinary to good chips, 3¾*d*. to 5½*d*; fine bright mossy and quilly chips, 6*d*. to 6½*d*; common to fine shavings, 3*d*. to 6*d*.; hybrid chips, 3½*d* to 4½*d*.; and shavings, 5*d*. to 5¾*d*.

EAST INDIAN CINCHONA.—*Original*—Red varieties: Fine partly broken druggists' stem quill, 10*d*.; ordinary medium brown quill, 3*d*. to 3½*d*; dusty to good bright quilly chips, 2*d*. to 3½*d*.; shavings, 2½*d*.; dusty to good root, 2½*d*. to 4*d*. per lb. Yellow varieties: Dust, 2*d*.; thin twigs, 2¾*d*.; fair to fine bright quilly stem and branch chips, 2½*d*. to 6½*d*.; root, 4¾*d*. to 6½*d* Grey varieties: Chips and shavings mixed, 3½*d*. to 5½*d*.; fair to fine bright quilly stem and branch chips, 2½*d*. to 5*d*.; a few lots, 6½*d*.; root, 6¼*d*. to 6½*d*. per lb. *Renewed*—Red varieties: Ordinary to fine bright quilly stem and branch chips, 2*d*. to 5*d*.; shavings, 3¼*d*. to 4*d*.; good chips, 5¼*d*. Yellow varieties: Ordinary chips, 3*d*. to 3¾*d*. Grey varieties: Common to fine bright quilly stem and branch chips, 4½*d*. to 7*d*.; a few lots, 7½*d*. to 8*d*.; chips and shavings, mixed ordinary, 3½*d*.; hybrid thin quilly chips, 3¾*d* to 6*d*.

SOUTH AMERICAN CINCHONA.—A considerable quantity of cultivated Bolivian Calisaya in quills sold at 8*d*. to 9½*d*. for fair silvery, and 4¾*d*. to 6½*d*. for broken quills and chips. Of red bark, 2 bales, together about 160 lbs., newly imported from Guayaquil, sold at 1*s*. 11*d*. for small broken pieces, and at 1*s*. 7*d*. for very dusty mixed ditto.

The shipments of cinchona from Java during the last five years (January 1 to December 31) have been:—

—	1891	1890	1889	1888	1887
	Amsterdam lbs.	Amsterdam lbs.	Amsterdam lbs.	Amsterdam lbs.	Amsterdam lbs.
Private plantations	7,165,927	6,109,423	4,066,352	3,136,086	2,223,466
Government plantations	742,760	518,884	772,988	529,942	682,319
Total ..	7,908,687	6,628,307	4,839,370	3,636,028	2,905,785

ERGOT OF RYE.—The market is exceedingly flat. Sales of Belgian ergot are reported at 1*s*. 11*d*. per lb., a decline of one penny.

GUM ARABIC.—A steady business is reported from Liverpool, and prices are very well maintained, *Senegal* gum having sold at 57*s*., and 70 cases fair *Niger* gum at 45*s* per cwt. There have been rather heavy arrivals in Liverpool from Brazil; the *Theresina* this week brought 446 bags.

INDIGO.—The periodical auctions of Central American indigo, which commenced on Tuesday, comprised 1,804 serons Guatemala, and 5 serons Mexican. There was a strong competition at higher rates, and nearly the whole of the supply brought forward sold at an advance of 3*d*. to 4*d*. per lb. for common and medium, and 2*d*. to 3*d*. per lb. for good and fine qualities. The new crop, of which this was the first consignment offered, is generally of good quality. About 300 serons were bought in at the auctions, but sold immediately afterwards at prices fully equal to those obtained at auction. The following are the figures obtained:—Ordinary to good Sohres, 3*s*. 5*d*. to 4*s*. 3*d*.; good to fine Cortes, 3*s*. 9*d*. to 4*s*.; good ordinary to good middling ditto, 3*s*. 4*d*. to 3*s*. 8*d*; low to ordinary ditto, 2*s*. to 3*s*. 3*d*. per lb.

IPECACUANHA is still arriving in rather large quantities, 74 bales being imported this week.

MENTHOL CRYSTALS have further advanced in price. Good white quality sold at 8*s*. per lb. last week, and now 8*s*. 6*d*. per lb. is asked for fine quality.

OIL (CASTOR).—The important news comes by mail from Calcutta, under date of February 17, that the oil-sellers are trying to form a combination to regulate the prices of castor oil. They are said to be forced to make this attempt owing to the neglected condition of the oil market and the unremunerative prices they obtain for their product, whereas the supply of seed is very scarce, and they are therefore compelled to pay high rates for their raw material.

OIL (COD-LIVER).—The fishing reports from Norway continue to be favourable, and there is great competition for orders among the agents here. For best new non-congealing oil, 60*s*. per barrel, c.i.f. terms, was quoted to-day. The Hamburg market has been exceedingly weak on account of pressing offers from some Norwegian first-hand producers, who have tried the experiment to go past the wholesale exporters and offer their oil directly to the producers. "The fishing at Lofoten up to February 26," writes a correspondent, "has been poor, and the prospects of any material improvement are anything but bright. In my opinion, nothing but an unexpected change in the Lofoten fishery can justify buyers in calculating upon lower prices. Sales of new oil have recently been made at 72*s*. 6*d*., c.i.f. United Kingdom. A few orders may have been executed at 70*s*."

OILS (ESSENTIAL).—The rise in Italian essential oils still goes on unchecked. For oil of *lemon* of fine quality the price is now 10*s*. 6*d*. per lb. f.o.b. Messina. Chinese *star anise* is rather quiet, and offers at 5*s*. 10*d*. per lb., c.i.f., to arrive. There

has been a somewhat better demand for Japanese oil of *peppermint* which is now held according to quality at 4*s.* 9*d.* to 5*s.* 3*d.* per lb. on the spot.

OPIUM.—The following is a description of the position of the Smyrna market on February 27 last:—The market has been much more active in February than in the previous month, the sales amounting to 300 cases, the greater part of which were for the United States. The Smyrna stock in first and second hands is now reduced to about 1,350 cases, and it is estimated that 250 to 300 still remain in the producing districts. Out of this quantity is is probable that not more than 600 will be required to meet the demand until the coming crop is fit for shipment in July next. Hitherto nothing has occurred to injure the young opium plants. It is therefore hoped that there will be a good outturn again this year, provided the weather continues favourable until the crop is matured.

ORRIS.—We hear from Leghorn, under date of March 1, that the demand for orris has been very restricted in consequence of the exceedingly high prices asked by holders. To this is added a somewhat general belief that the prospects for the next crop are favourable. The view, therefore, seems to prevail that the market is upon the brink of a serious collapse.

PHOSPHORUS firmly held at last week's advanced quotations. Russian (which was hitherto obtainable at a reduction upon the French and English quotations) is not being offered at present.

SHELLAC.—The market closed with great depression last week, with sales for shipment and delivery at lower prices. On the spot the demand was exceedingly slack, and no business has transpired. On Monday the market opened weaker, with a sale of 100 cases TN orange at 82*s.* per cwt., declining to 80*s.* for August, and at 78*s.* for April delivery. At the auctions on Tuesday 1,586 cases were offered, of which 1,055 sold (holders showing much desire to realise) at a decline of from 5*s.* to 6*s.* on *Second orange*, and 4*s.* on *Button* and *Garnet* lacs. The following prices were accepted:—Second orange: unworked, pale reddish slightly cakey, 78*s.* to 79; worked, fair pale, 77*s* to 78*s.*; strong red to good bright flat, worked and unworked, 75*s.* to 77*s.*; ditto broken and livery to fair pale, 71*s.* to 75*s.*; worked livery block, 69*s.* to 71*s.* per cwt. Garnet lac: good flat AC, 76*s.*; curly bronze, 72*s.* to 73*s.*; ditto cakey, 71*s.* per cwt. Button lac: cakey to good unworked first and second, 82*s.* to 83*s.* per cwt. The private market is demoralised, and TN orange for August delivery has sunk to 78*s.*, while for April 75*s.*, and for May 76*s.*, has been accepted. On February 17 there was a good demand for shellac in Calcutta for shipment to America, the better grades of orange lac being particularly in request for that purpose.

TURMERIC.—At the drysaltery auctions several parcels of Cochin and China root (of which the arrivals have been heavy lately) were forced for sale, the result being a decline of about 4*s.* to 5*s.* in the value of the former, and of 1*s.* 6*d.* in the value of the latter. Of 366 bags *China* root 144 sold (without reserve) at 19*s.* 6*d.* for fair bright finger, and 14*s.* to 15*s.* for bulby finger. Of 357 bags *Cochin* 167 were disposed of at 8*s.* 6*d.* to 8*s.* 9*d.* for split bulbs.

Thursday's Market News.

42 CANNON STREET, E.C., *March* 10.

ACID (CITRIC).—The market is rather firmer to-day, at 1*s.* 5¼*d.* per lb. for prompt delivery. It is said that sales of concentrated juice have been made at 19*l.* 10*s.* to 19*l.* 15*s.*, but from Messina the quotation is 21*l.* 10*s.*, f.o.b., for prompt, and 22*l.* 5*s.* for future, shipment.

ACID (PHOSPHORIC).—The new price will probably be fixed to-night. It is thought that it will be 1*s.* 2½*d.*—an advance of 3½*d.* per lb.

ACID (TARTARIC).—The lowest quotation yet given is 11¼*d.* per lb. for foreign brands, but with a firm order even that figure might, perhaps, be shaded.

ARROWROOT remains firm, with sales of newly-imported St. Vincent at 3¾*d.* to 4*d.* for fair to good. A consignment of fine Bermuda, imported *viâ* New York, realised 1*s.* 3*d.* per lb.

BLEACHING-POWDER.—Firmly held at 7*l.* 10*s*, f.o.b. Tyne or on rail in Lancashire; delivery not guaranteed.

CAMPHOR (CRUDE).—China is dull, and no business has transpired; from 106*s.* to 107*s.*, c.i.f. terms delivery rates, will probably be accepted. Japan is not offering now below 117*s.* 6*d.*, c.i.f.; some business having been done at 115*s.*, c.i.f.

CAPSICUMS.—Higher for good qualities. Bright small picked Madras have sold at 28*s.*; dull ditto, 24*s.* to 24*s.* 6*d.*; ordinary partly damaged Japan, at 5*s.* to 10*s.* per cwt.

CHILLIES are exceedingly firm and scarce, the London stock being very small indeed. At the auctions this week, 197 bales from Zanzibar were partly sold at 57*s.* to 62*s.* 6*d.* for ordinary dull quality, and 72*s.* 6*d.* for fair brightish quality. For forward shipment there is nothing offering at present.

CHLORATE OF POTASH.—For small parcels 7*d.* per lb. is asked here, but an order of fair extent might still be put through at 6¾*d.* per lb. Second-hand holders also offer at 6¾*d.* per lb., f.o.b. Liverpool.

COPPER SULPHATE has advanced, and closes firm at 14*l.* 5*s.* for ordinary kinds in London, while Liverpool quotes 14*l.* 15*s.* in second-hands, but 15*l.* 10*s.* from the makers.

CREAM OF TARTAR is very sluggish; for best white French crystals 88*s.* per cwt. would be taken.

ERGOT OF RYE.—Although prices have declined the market remains stagnant; *Spanish* is quoted at 2*s.* 5*d.* to 2*s.* 7*d.* per lb., spot., according to quality. Belgian at about 2*s.* per lb. Wormy Spanish is said to have been sold this week at 2*s.* per lb.

GALLS (CHINA) are held on the spot at 46*s.* to 51*s.* according to quality, but for arrival the market has declined, and there are now sellers at 45*s.* 3*d*, c.i.f. terms.

GAMBIER is quiet, with sales at 20*s.* 6*d.*, landing weights, for block on the spot. Cube gambier is selling in a small way at 32*s.* to 32*s.* 6*d.* on the spot, and to arrive at 31*s.* 6*d.* per cwt.

GINGER.—Of new crop Jamaica ginger 40 barrels sold at 47*s.* to 51*s.* 6*d.* for common mouldy to small thin, and 55*s.* to 57*s.* 6*d.* for low medium. Cochin ginger is about 1*s.* lower, 315 bags being sold at auction without reserve; fair dull to good, 44*s.* to 45*s.* 6*d.* per cwt.

GLYCERINE.—Tending downwards. The manufacturers' agents ask from 48*l.* to 49*l.* per ton for double distilled s.g. 1,260, but it would, no doubt, be possible to buy for less.

GUM OLIBANUM.—Ordinary drop is lower, but there is very little demand; only a few lots were sold at auction—good pale to fine drop, 50*s.* 6*d.* to 61*s.*; medium to fair, 24*s* to 28*s.* per cwt. This is a decline of about 2*s.*

JALAP.—Reports from New York, dated March 2, say that great attention is being paid to the article by speculators, over 45 bales having been purchased from the importers at high prices. The market is firm, good Vera Cruz being offered not below 1*s.* 6*d.* per lb., c.i.f. terms.

OILS (ESSENTIAL). — There is no change in Italian essential oils to-day, and the price of standard brands of *Lemon* remains at 10*s.* 6*d.*, f.o.b. Messina. It is said that about 5,000 lbs. have been sold for shipment to the United States at that price *Bergamot* may be had at 10*s* 9*d.* to 11*s.*, f.o.b., and *Oil of orange* at 9*s.* to 9*s.* 6*d.* for best sweet. American *Oil of peppermint*, HGH brand, is quoted here at 13*s.* 3*d.* to 13*s.* 6*d.* per lb. *Eucalyptus* oil very dull and neglected; 3*s.* is about the nearest value for fair quality Australian oil. Japanese *Peppermint* is very firm, 4*s.* 9*d.* having been paid on the spot, and more money is now asked; to arrive much higher prices are quoted. *Star anise* dull of sale; small business is reported at 6*s.* 3*d* per lb.; on the spot and for arrival the quotation is 5*s.* 10*d*, c.i.f terms. *Oil of Cassia* fairly steady at 3*s.* 4*d* to 3*s.* 6*d.* *Lemongrass* on the spot, 1½*d.*; *Citronella*, ⅝*d.* to ¾*d.* per oz.

PEPPER.—The spot market is very flat, both for black and white pepper. Of the former 310 bags Singapore were partly disposed of at auction at 5⅛*d.* to 5⅜*d.* for dull to good; for fair unlimed Penang 4½*d.* was paid; black Singapore, fine clean washed, brought 3⅜*d.* to 3½*d.*

PIMENTO is rather easier, and of 837 bags which were offered at auction, 260 sold at 2¾*d.* to 2 13/16*d.* for ordinary to medium.

QUICKSILVER remains very firm, at 7*l.* 2*s.* 6*d.* per bottle from the importers; none is offering in the secondhand.

QUILLAIA.—Prices are lower, a parcel shipped from Chili this month being offered 26*l.* per ton, c.i.f. terms.

QUININE.—Very little business is doing, only a few odd thousand ounces having sold lately at 9¾*d.* to 9⅞*d.* There is not much offering at the lower of these quotations, however. The following are the makers' quotations:—Howards', in bulk, 1*s* 1*d.* to 1*s.* 2*d.*; in vials, 1*s.* 3*d.*; Zimmer & Jobst, 1*s.*; Brunswick, Mannheim, Auerbach, and Milan, in tins, 11*d.* per oz. Pelletier's, in vials, is held as high as 1*s.* 9*d.* per oz. The imports of cinchona during the last fortnight have been comparatively small, consisting of 1,926 bales, of which about two-thirds are from India.

SARSAPARILLA.—New York advices, dated March 2, state that the stock of Mexican sarsaparilla in the market is almost exhausted, while in Honduras root there has been an active speculation, no less than 300 bales having changed hands at secret prices.

SHELLAC.—The market has shown a much better tone to-day, 300 cases TN orange having been taken at 80*s.* 6*d.* for August delivery, while there are buyers at 78*s.* for April and May.

SODA CRYSTALS.—The market is very firm at 62*s.* 6*d.* ex ship Union price; Tyne, 57*s.* 6*d.*; and from the London makers, 64*s.* per ton.

STICKLAC.—Quiet, and tending rather easier; good Siam held for 82*s.* per cwt.

SULPHUR.—A falling market; best thirds are now offering at 98*s.* per ton, c.i.f. terms.

TEA.—The tea trade is very flat, and dealers are all complaining of scarcity of orders. Buyers have all thought so many times lately that things had got quite to the bottom, and bought accordingly, only to find a lower quotation a day or two after, that they appear to be determined to hold off buying till they have reduced stocks a bit. Consequently, while prices are not lower this week, business is very dragging, and orders far from plentiful, although leaf Assam, now selling at 4½*d.* to 5*d.*, were fetching 9*d.* to 10*d.* a twelvemonth ago. It is the backward swing of the pendulum again, prices now being as much below normal quotations as they were above this time last year. Deliveries are fairly good; but stocks are too heavy at present for any immediate prospect of a substantial advance. Capers are as cheap as ever, and good leaf glazey olive tea sold on Wednesday at 4¾*d* per lb. Fair liquoring-leaf Ceylon and Assams can be bought in quantity at 5*d.* to 5¼*d.*, and common at 4½*d.* to 4¾*d.* per lb. Finest teas continue to be wanted at full prices.

THYMOL firmly held at 16*s.* to 17*s.*

THE LIVERPOOL MARKET.

ASPHALTUM.—A parcel of fine Syrian offered at auction and was bought in at 25*s*

CANARY-SEED.—Very firmly held at 35*s.* to 37*s.* 6*d.* Advices from Constantinople speak of the next crop being short, and many holders are off the market.

CANNABIS INDICA.—Eleven bales good brown, part of recent arrival, sold at 4*d.* per lb. For fine green 4½*d.* is asked.

CHILLIES.—Fine Sierra Leone reds have realised a sharp advance—a parcel of 200 bags just arrived realising 57*s.* 6*d.* per cwt. The market is not quite cleared.

CHLORATE OF POTASH is very firm indeed. The Alkali Union have now fixed their price at 7*d.* for delivery at an early date, and 6¾*d.* forward. A decline is not looked for. *Potashes*, the quay being cleared, have recovered to 24*s.* to 25*s.* *Pearl-ashes* unchanged.

COCHINEAL.—More has been done in these, and 11½*d.* has been the price for one or two parcels of Teneriffe blacks.

COPPER SULPHATE.—The spring demand seems to be setting in early, and this fact, combined with the influence of the coal difficulty, has caused an advance of 10*s.* to 15*s.* per cwt. The article is expected to advance further.

CREAM OF TARTAR continues to decline—first white being slow of sale at 91*s.* to 92*s.*, and offers forward are at a parity of these prices.

FENUGREEK-SEED.—One hundred bags fine bright yellow Bombay sold at 9*s.* 6*d.*, and the same quantity of brown ordinary Alexandria, just arrived, are held for 9*s.*

GALLS (TURKEY).—Forty bales of small prickly blue offered, and 10 sold at 75*s.* The balance is held for the same price.

HONEY.—This is still in retail demand. Sales of good Pile 1 *Chilian*, 31*s.*; Pile 2, 29*s.* 6*d.* per cwt.

OIL (CASTOR).—As anticipated last week, this article has advanced. All the cheap parcels from the quay have been cleared off; 2⅝*d.* has been freely paid, and now 2 11/16*d.* is asked on spot, and has been paid freely forward. French oil sells slowly at the prices lately fixed by the syndicate.

GERMAN MARKETS.

HAMBURG, March 8.

THERE has been a considerable business doing in some few articles; but trade in general remains more or less stationary, and without large speculative excitement.

ANTIMONY (CRUDE JAPANESE).—After the recent sales at low prices, this article has recovered somewhat in strength, and to-day it cannot be had under 47m.

BALSAM (COPAIBA).—Falling in value; the arrivals still remain large, and they depress the markets considerably. Genuine quality is already offering as low as 3.5m.

BALSAM (TOLU).—More interest is being shown in this article, and a considerable part of what is now held in the first hand has been sold at high prices. Genuine is not quoted below 9½m., and difficult to buy even at that figure.

CAMPHOR.—Both refined and crude are again a little firmer.

GUM ELEMI.—Holders of genuine Manilla gum are wanting more money now; for fine white quality they ask 80m.

JALAP.—Well maintained in price, and good quality is in request. Thirty-five bags imported here by the *India* have been sold quickly; further small lots are expected daily.

LYCOPODIUM has nearly all been sold out, and only small lots are still available, for which 3.90m. to 4m. must be paid.

MUSK-SEED.—Quite neglected; there are about 70 bags left in the first hand.

ORANGE-PEEL.—Much higher prices are paid for Curaçao peel, of which the market is now quite clear.

QUILLAIA.—On the spot high prices can still be realised, and it is impossible to buy below 55m. to 57m., but for delivery the article is offering at lower rates, and with a firm order it would be possible to get it as low as 49m.

SENEGA-ROOT.—Higher in price; our stocks are insignificant.

THE SMYRNA OPIUM MARKET.

(Telegram from Our Correspondent.)

SMYRNA, Wednesday night.

THE American morphia-makers have again been in the market here. They have bought another 250 cases of manufacturing opium, at the parity of 6*s.* 9*d.* to 7*s.* per lb., f.o.b., prices being well maintained.

Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest; we shall do our best to reply.

Before writing for formulæ consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Regular and Irregular Prescriptions.

SIR,—Upwards of thirty-five years' experience behind the counter—during which I have copied many thousands of prescriptions written by members of the medical profession, "the governor," and some of my own construction—has made me thoroughly acquainted with the several points suggested by Mr. Bell in his letter to you of March 5 as necessary for that which he designates as the "ideal prescription-book"; but I should like to know how Mr. Bell is able to discern the prescription of a properly qualified medical man? In a former letter I think he says that the prescription should have the name of the patient, the date when it was written, and the initials of the prescriber; if these are the only guide I shall not be surprised to find that some of my own have been entered in Mr. Bell's ideal prescription-book as "regular prescriptions," for I happen to be located in a district through which there is constantly passing an itinerant population of a certain class who, judging by the impressions of dispensing chemists' stamps upon their prescriptions, travel all over the United Kingdom, and, having given some of them a medicine which has been very beneficial, they have paid me for the prescription rather than have to send for it from a distance; and in every instance where this has been done the prescription was written out in such a manner that neither Mr. Bell nor any other dispenser of medicines could distinguish it from that of a medical practitioner. I am obliged to you, Mr Editor, for the footnote to my last letter, suggested no doubt by the want of perspicuity on my part. My intention was to show that the original prescription was not recopied every time it was repeated, and that even repeats were not numbered. No memorandum is made of mixtures repeated unless they contain poisons as defined by the Pharmacy Act.

En passant, I may mention that one prescriber in this district who has an extraordinary practice, is only connected with the Royal College of Surgeons—therefore his prescriptions in many cases are quite as illegal as mine.

With regard to Mr. Bell's remarks respecting counter-prescribing, I do not admit that to supply a medicine for a customer and to enter the component parts thereof in the prescription-book for future reference, if necessary, is illegal. All depends upon the surrounding conditions—as you, Mr. Editor, justly observed last week, it is not counter-prescribing which is illegal, it is acting as an apothecary which brings one within the pale of the law; and I can assure Mr. Bell that I do not fear the consequences he portends, as I do not endeavour to convey the idea that I am an apothecary, but I have frequent instances that a medicine prepared many years ago is asked for again, and if I had kept no record it is just possible I should have been unable to recall its composition; besides which, when we have to learn so much every week respecting new medicaments, why should our brains be strained with remembering such facts when they can be recorded in a book, and why should two books be kept when one will answer every purpose? I admire Mr. Bell's desire to be neat and methodical, but I think his method with respect to prescriptions is not the best, and therefore I shall go on in my own way.

Yours,

BUSY MAN. (250/19.)

Mineralised Methylated Spirit for Polish.

SIR,—Your correspondent says he finds spirit-varnish made with the new mineralised methylated spirit does not put a polish on wood.

Without gainsaying this, we would say we have found mineralised methylated spirit in combination with linseed oil make quite as good a polish as when unmineralised methylated spirit was used.

But we think he should be careful to specify whether the mineralised methylated spirit he uses is 64 o.p., or 60 to 61 o.p., because, on more than one occasion, though the weaker article seems efficacious for burning purposes, we have heard those who used it assert that it was not as serviceable for polishing as the 64 o.p., the addition of water for reducing seeming to cause a bloom (such was their phrase) on the polished surface of the wood.

Yours truly,

Bristol, March 4. A. & J. WARREN.

Cheshire Red Bottle.

256/16. *Belladonna* sends us the subjoined formula for this preparation:—

P. boracis	12 oz.
P. potass. nit.	8 „
Tinct. opii	6 „
Spt. camphor.	10 „
Ras. santal rub.	2 „
Ol. origani..	2 „
Tr. capsici..	4 „
Aq. ferv.	cong. j.

M.

Allow to stand a day or two, and filter.

[Label.]

THE [Group of Cattle] FAMOUS

CHESHIRE BOTTLE

PREPARED FROM THE ORIGINAL RECIPE.

The properties and doses of this highly-prized medicine are as follows:—

For a Cow Blown or Hoven.—Two wineglassfuls in a pint of mint tea, hot.

Red Water or Black.—Two wineglassfuls in a pint of warm milk or whey.

Bloody Urine.—Two wineglassfuls in a pint of linseed oil.

Diarrhœa or Scouring.—Three wineglassfuls in a pint of milk, previously boiled with a little flour.

Fellon Cold or Influenza.—Three wineglassfuls in a pint of warm treacle-water.

Colic or Gripes in Cow or Horse.—Quarter-pint in a pint of hot water with wineglassful of turpentine, rubbing the loins with same.

Garget or Downfall (Gorgle) in Udder. Apply the Cheshire Bottle warm.

Milk Fever.—Quarter-pint with one ounce of alum in a quart of barley-water.

Diarrhœa or Dysentery (Gurr) in Calves.—A large tablespoonful (first dose) with one ounce of castor oil in half pint new milk; (second dose), in half-pint new milk and half-ounce chalk.

AS A DOMESTIC MEDICINE.

When suffering from Rheumatism.—One tablespoonful night and morning, and apply the same on part affected.

Toothache.—Rub the gums and apply to decayed teeth.

Pains in Stomach, Stitches, &c.—Two teaspoonfuls in a little warm water and sugar, and rub the part affected with same.

Sore Cuts, Green Wounds.—Apply the Cheshire Bottle frequently.

Sprains, Bruises, &c.—Rub the part affected with same.

Inflammation or Pains in the Bowels.—Two or three teaspoonfuls in a little warm water and sugar.

May be used for Children for any of the above complaints.—DOSE.—Three to five drops, according to age.

When suffering from Worms.—Give a small teaspoonful, night and morning, fasting.

Price, 1s. 1½d., 1s. 10½d., and 2s. 9d.

The Toxicity of Chloroform.

Referring to the correspondence on this subject in recent issues a correspondent (265/18), who has large experience in the administration of chloroform, states that clinical experience with the chloroform purified by freezing does not corroborate the assertions regarding its safety. For instance, in the *Medical Press* of February 15, 1892, M. Koite reports that he has had a very unfortunate experience with that preparation; one death occurred amongst the first twenty-five cases in which it had been used. Death took place in a young man of eighteen years, when from 8 to 10 grammes

had been used. The heart was sound, and there was no fatty degeneration in any organ. The case strengthened his conviction that deaths from chloroform were not, as a rule, due to any impurity in the drug used, but to the idiosyncrasy of the patient.

The last conclusion is nonsense, for it is quite evident, although the duration of administration has not been mentioned, that death was due—as it is, and has been, in all such fatalities—to an overdose, or, in other words, to insufficiency of common air required for the normal function of respiration.

Again, in the *British Medical Journal* for February 6, Dr. James Parker, of Glasgow, inquires, "What is the cause of the fatal issue?" After which he says: "I myself have had the opportunity of making a post-mortem examination of a girl, who died from what I take to be an overdose of methylene. The right side of the heart was gorged with fluid blood of a peculiarly aromatic odour. The left ventricle was firmly contracted. The organ itself was quite normal and competent, as were the other organs of the body, and there was no obstruction of the trachea." These conditions are accepted as due to asphyxia, but Dr. Parker attributed the death to syncope, due to her having been placed and narcotised in an upright sitting position. He overlooks the fact that a too concentrated narcotic vapour offers an obstacle to respiration just as effective as a cork tightly placed in the trachea. It is, therefore, plain that the death must be attributable to an overdose.

Safe administration of chloroform is made simple and sure enough if the teaching of the Hyderabad Chloroform Commission is followed. No more is required than ordinary care to watch the respiration and to keep it regular throughout.

Carboy Solutions.

SIR,—Distilled water is invariably ordered to be used for making solutions for show-carboys. It may be useful to some of your readers to know that tap-water will do as well if it is first "softened" with the ordinary "water-softener." I made some solutions a little while ago (having added the "softener" to the water in a large bath overnight), and they turned out beautifully clear, and have remained so.

Yours truly,

March 5. YORKS. (249/35.)

The New Examinations.

SIR,—May I be allowed to call attention to the awkward arrangements made for candidates from the country for the last Major exam. in London?

The written paper was given on Tuesday and the practical not until Friday and even Saturday of the same week, and then there followed the *viva voce*.

It seems to me that it was a happy thought to reduce this fee to 3*l.* 3*s.* because of the additional expense incurred, which must be more than 2*l.* 2*s.*, especially if men are actually engaged in business at the time of presentation. It means three journeys to London.

Yours faithfully,

MAJOR SYMPATHISER. (250/50.)

[We have received a similar but more serious letter regarding the Minor examination, but the writer has not sent his name and address. Perhaps "A Would-be Minor Man" will communicate with us.—ED. *C. & D.*]

Ext. Cocæ Liquid.

SIR,—Can you or any of your readers throw light on the following?

I have at present in stock two samples of ext. cocæ liq., B.P.

No. 1 has been in stock some time, is perfectly clear and bright when mixed with water (℥j. in ℥j.), brown in colour resembling very brown sherry.

No. 2 has been purchased within the last month, is a very dark green in colour, and mixed with water (℥j. in ℥j.) is a turbid green, brighter in colour but somewhat resembling mist. ferri co. In taste both are somewhat similar.

A mixture dispensed with either of these would differ greatly from the other, and the customer would notice the difference, and most likely conclude that the chemist who dispensed the first was right and the other wrong. The question is, which of the two is the official preparation? Some of your readers may have met with the same difficulty as myself.

Yours, &c.,

AN OLD SUBSCRIBER. (249/24.)

LEGAL QUERIES.

263/12. *Nemo.*—It is open to everyone to sell calomel or an ointment containing it.

249/35. *Yorks.*—We should say the Excise officer is correct in his remark that a medicine "once liable" is "always liable". Read Alpe's "Handy-book of Medicine-stamp Duty," if you wish to understand the law.

249/73. *Seidlitz.*—We do not think the label "Mild seidlitz powders," would suffice to justify the sale of short-weight seidlitz-powders, though, no doubt, a good defence might be built upon it.

249/46. *H. F.*—Unregistered persons may sell poisons by wholesale; but the regulations which apply to the labelling of poisons are applicable in the case of wholesale transactions, except that it is not necessary that the name and address of the vendor should appear on the label.

248/59. *Justice.*—Having received further information, furnished by our correspondent in this matter, we may point out that if a man sells essence of lemon he represents that the goods are essence of lemon, and it is a condition precedent of the contract that essence of lemon shall be supplied. A mixture of petroleum and other things—not preparations of lemons—might be described as hair-oil scent, but could not be described as essence of lemon, and it would be no fulfilment of the contract to supply same. The remedy of the buyer is to reject the goods immediately on discovering their nature and decline to pay for same, and to bring an action for breach of contract. If the purchaser has already given an acceptance for the goods he should give notice to the vendor not to part with such acceptance, and if he has reason to believe that the acceptance will be negotiated he should ask for an injunction in his action to prevent it. There was a very similar case decided in the year 1863 with regard to oxalic acid. In that case (Kingsford *v.* Gosling, 32 L.J. C.P 94) the purchaser had had an opportunity of inspecting the bulk before purchasing, but it was impossible to ascertain from an ordinary inspection that the bulk was adulterated. The Court, nevertheless, held that he was not bound to accept the goods. This case was followed by another important case (Mody *v.* Gregson, L.R. 4 Ex. p. 56) in the year 1868. In that case certain piece goods had been adulterated with china clay to make them have a certain weight. The goods corresponded with the sample, but adulteration could not be detected by ordinary inspection. There the Court held that the purchaser was not bound to accept the goods although they had been shipped abroad.

MISCELLANEOUS INQUIRIES.

244/21. *M. D.*—The chemist *v.* fishmonger case was reported in this journal February 7, 1891.

243/26. *Straw.*—Varnish for Black Straw Hats, leaving a gloss:—

	oz.
Shellac	4
Sandarac	1
Gum thus.	1
Meth. spt.	20
Aniline dye (black)	q.s.

Dissolve resin by heat of water-bath, and then add the colour. To be applied with a brush.

250/27. *Radix.*—All about Dogs' Diseases and their Treatment is given in "Veterinary Counter Practice," which you can obtain from our office, by post, for 3*s.* 9*d.*

243/53. *Mag. Cit.*—(1) Arquebusade is an old vulnerary of French origin. The following is a formula for it:—

Ol. absinthii	♏xvj.
„ lavandulæ	♏xvj.
„ marjori	♏xvj.
„ menthæ pip.	♏xvj.
„ rosmarini	♏xvj.
„ rutæ	♏xvj.
„ salviæ	♏xvj.
Spt. vini rect.	℥xxx.

Mix and add—

Aq. tepidæ	℥xl.

Shake well, and strain through cotton-wool.

(2) Artificial Tincture of Musk is a preparation made by acting upon oil of amber with nitric acid, and dissolving the product in rectified spirit.

244/71. *B. C.*—(1) Liquid Blue for laundry use is made by dissolving ¾ oz. of the best Prussian blue and 3 drachms of oxalic acid in a wine-quart of water. (2) Glycerine and Lime juice.—See our issues of August 8, 1891, page 229, and November 28, 1891, page 798. (3) Cold Cream cannot, properly speaking, be cold cream without water. See the note on the subject in our DIARY for 1891, page 169. This you will read with instruction. If you will have a cream without water perfume simple ointment with otto of rose, and stir until cream-white.

245/10. *R. Payne.*—A mixture of black pitch, 4 parts; gutta-percha, 1 part; and boiled linseed oil, 1 part, heated until liquid, makes a fair Cement for Bicycle-tyres. The metal rim should be warmed before the hot cement is applied, and do not use too much of the cement, as the less used the better are the results.

245/25. *Menthol.*—See reply to "J. O." (241/74), last week. You can stiffen the preparation by increasing the amount of resin.

245/69. *Canonicus.*—The Weed-killer (248/4) will bear dilution with four times its bulk of water. It is too weak in hydrochloric acid to do much harm to tin cans, but instead of the acid you may use 2 lbs. of washing-soda if you wish to put it up in this way.

245/8. *Eucalyptus.*—Cheap Bottling-wax.—A large number of formulæ have been published in this journal. See, for instance, August 8, 1891, p. 219.

246/56. *Zetara.*—The artificial essence of musk mentioned above may be used for perfuming powdered soaps.

246/61. *Eastonii.*—The separation of quinine from Syr. Eastoni, Ext. Pharmac., is a matter which has been discussed in this journal on several occasions, the trouble being one of common experience. The fact is, too much is expected of the solvent—dilute phosphoric acid. There is actually more solid than liquid in the syrup, and when low temperatures such as we have recently experienced come on, something separates out. Ferric phosphate we have often found, and quinine phosphate also appears to separate in small quantity. This can be avoided by reducing the quantity of sugar to ʒivss. per oz. of the finished syrup—that is, 13 oz. avoir. to the pint—making up the bulk with water.

246/42. *Quæro.*—You must send the original certificate to the Registrar. He will return it to you.

250/11. *L. P.*—To become a member of the Society of Apothecaries you must pass the Preliminary examination of the Society, get your name placed on the register of medical students, fulfil the medical curriculum, and pass the professional examinations. For full particulars we refer you to our last Educational number.

246/35. *A. B. C.*—Further than the article in Thorpe's "Dictionary of Chemistry," there is no important modern work on dialysis. Professor T. Graham's classic paper on "The Diffusion of Liquids" is, of course, the most notable monograph on the subject. This forms part I. of the "Philosophical Transactions" for 1850.

246/33. *Ferrum.*—Our reply to "Eastonii" answers your question.

246/23. *Areca* asks—(1) When hydrarg. chlor. is written in prescription (at the Minor examination) what should be dispensed? [That altogether depends upon the nature of the prescription. The dose gives an indication of what is intended. If "Areca" refers to page 248 of "The Art of Dispensing," he will notice the following examination-prescription:—

Hyd. perchlor.	gr. ij.
Ext. coloc. co.	gr. iij.

Ft. pil. Mitte. xij., &c.

Clearly calomel is meant here, and anyone dispensing corrosive sublimate would be sure of rejection.] "Areca's" second question is—At the Minor Examination, in "Botany," the plants given for recognition, are they dried plants or fresh ones? [Both fresh and dried, according to the season of the year. If "Areca" will glance through the list given on page 433 of THE CHEMIST AND DRUGGIST, September 19, 1891, he will see that in the winter months it would be impossible to have fresh plants of some things on the table. Good mounted specimens are always given.]

246/31. *Infant.*—The most satisfactory plan you can adopt for making Infants' Food is to get a baker to make a mixture of 3 parts of the finest wheaten flour and 1 part of finely-sifted malt into biscuits, adding 5 per cent. of milk sugar to the flour-mixture. The biscuits should not be browned, nor should any butter be added to the dough. Grind the biscuits while fresh. There are many rather roundabout processes for the preparation of the food, but most of them come to the same thing in the end.

249/19. *Spes.*—Dr. Reece's "Medical Guide" (168 Piccadilly, W.) is reckoned one of the best books for sea-captains.

Information Supplied.

Dr. Rainy's Hair-wash.—The following recipe was what I used to give in Edinburgh for Dr. Rainy's (of Glasgow) hair-wash:—

Tinct. capsici	℥ss.
„ cantharid.	ʒj.
Ol. bergamott...	♏ij.
Aq. rosæ	℥iij.
Spt. vini rect. ad	℥xij.

M. sec. art.

CALEDONIA. (247/7.)

Book on Disinfectants.—A subscriber (248/53), writes: "In your reply to 251/15, "J. P.," you state that "there is no work dealing solely with disinfectants." The late Dr. Angus Smith published such a work.

[We thank our correspondent, but may add we were aware of that, but 1869 (the year of its publication) is a far cry back in the matter of disinfectants. Since then the whole subject has been revolutionised.]

Information Wanted.

Replies to the following are requested for insertion in THE CHEMIST AND DRUGGIST.

292/92. Formula for a label-varnish for chemical-reagent bottles, to protect them from destruction by acids and alkalies.

237/11. Formulæ for American drinks, squashes, cocktails, &c. Is there a book published?

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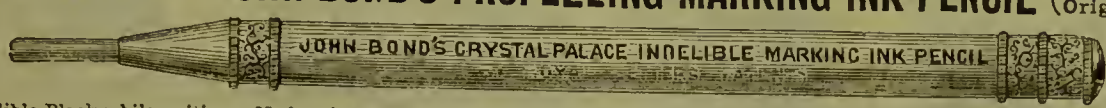
6d. 

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4d. per tablet or 1s. per box of 3 tablets. Floral 6d., Balsamic (Medical) 8d., Otto (Toilet) 10d., and Vestal 2s. 6d. per tablet. "Vinolia" Cream (for Itching, Eczema, &c.) 1s. 9d., "Vinolia" Powder (for the Toilet, Nursery, &c.) 1s. 9d.

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FIG. 1.

FIG. 4.

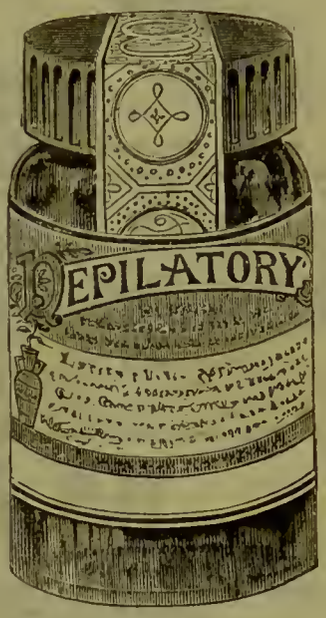

FIG. 2.

FIG. 5.

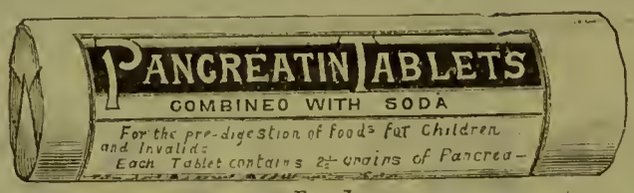

FIG. 3.

LAXATIVE FRUIT LOZENGES.

DEPILATORY.

PANCREATIN TABLETS.

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PECTORAL LINSEED BALSAM.

SAVAR'S COCA WINE

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FIG. 1.—Containing Finest Chocolate and Black Currant Paste in combination with delicate but efficient laxatives.
Style—2 oz. actinic glass bottle with capsule, and label in colours.
Price—9/ doz.; 6 doz. 8/6 doz.

FIG. 2.—This remarkably efficacious preparation for removal of superfluous hair without pain is put up in screw metal-capped actinic bottles, with a well designed label.
Price—6*d*. size, 3/9; 3 doz. 3/8; 6 doz. 3/6. 1/- size, 7/-; 3 doz. 6/9; 6 doz. 6/6. 1/6 size, 10/-; 3 doz. 9/6; 6 doz. 9/-

FIG. 3.—*For the pre-digestion of Foods for Infants and Invalids.*—Each Tablet contains 2½ grains of pure Pancreatin and 8 grains of Bicarbonate of Soda.
Style—A tube bottle, labelled; a handbill with full directions is wrapped round the bottle inside the wrapper.
Price—1/ size, 7/ doz.; 6 doz. 6/6; 12 doz. 6/. 6*d*. size, 4/ doz.; 6 doz. 3/9; 12 doz. 3/6.

FIG. 4.—A Cough Mixture, under the name of "Balsam of Honey." It is pleasant in flavour, being more like a liquour.
Style—1½ oz., 3 oz., and 6 oz. In handsome blue paper, bearing label for name and address.
Price—6*d*., 3/9; 6 doz. 3/9 doz.; 1/, 7/6; 6 doz. 7/ doz.; large 1/6, 11/; 6 doz. 10/6 doz.

6*d*., 1/, and 1/6. Same prices as Balsam of Honey.
The WHOLE of the wording may be changed to suit the requirements of Customers, as we have the labels in blank.

FIG. 5.—A concentrated restorative tonic, standardised to contain ½ grain of pure alkaloid per ounce.
Must now be Stamped.
Price—4/ bottles, 40/ per doz.; 7/, 69/ per doz. Unstamped for dispensing, 33/ and 57/ per doz.

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DOSE.—Internally: One Teaspoonful three or more times a day (as indicated), either full strength or diluted, as necessary for varied conditions.

LISTERINE is a well-proven antiseptic agent—an antizymotic—especially useful in the management of catarrhal conditions of the mucous membrane, adapted to internal use, and to make and maintain surgical cleanliness—asepsis—in the treatment of all parts of the human body, whether by spray, irrigation, atomization, or simple local application, and therefore characterised by its particular adaptability to the field of

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PERFECT TOOTH AND MOUTH WASH,

Its value in this direction having been fully determined by the most conservative element of the Dental Profession.

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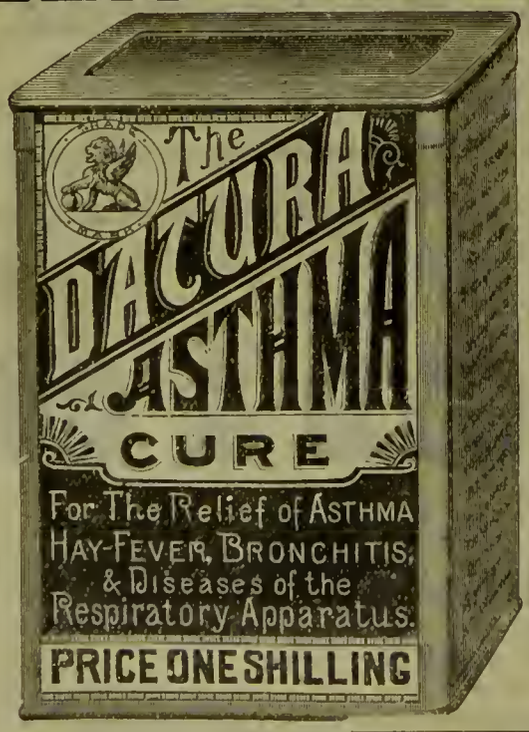

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Shrubland Grove, Dalston, 16/9/91.

DEAR SIR,—Will you allow me to testify to the value of the "Datura" Asthma Cure? I have been for years a great sufferer from Asthma, and, after trying most of the advertised remedies for the relief and cure of this distressing complaint, I can honestly say that from none have I experienced such immediate relief as from the above remedy.

I may say that I have tried a similar powder, which cost me just treble the money, and it has not been anything like so effectual in stopping the attacks of Asthma as the "Datura" Asthma Cure.

Yours faithfully, R. B.

Copy of Testimonial sent to Mr. J. Burt, Chemist, Worthing.

17 Alexandra Road, Finsbury Park, London, N., June 29, 1891.

DEAR SIR,—Kindly send me by return a tin of your "Datura" Asthma Cure; enclosed P.O. for 1/6 to cover postage.

My little boy, aged nine years, finds it the greatest relief in most severe attacks of Asthma. I bought a tin last summer while staying at Worthing.

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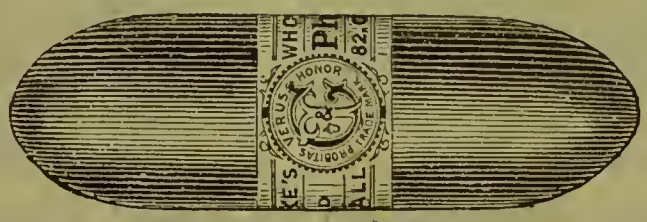

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	Doz.
6*d*. size Cut Ring Bottle, stoppered	4/-
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*1/- Lundborg shape, stoppered, 1 oz., 8/-
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Veg. Ivory, 3/6 doz. " 4/- " " Menthol or Eucalyptus or Pine.
Each in Box, 6*d*. retail. A good combination is Menthol and Eucalyptus.

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6*d*. Watch, 3/9 doz.; 6*d*. Actinic Stand-up, 4/- doz.; 1/- Stand-up Actinic, capped, 6/6 doz.

A1 Influenza Snuff.
3*d*., 1 doz. on a card, 1/8 doz.

A1 Carbolic Tooth-powder, in Tins.
1 oz., 3/- doz.; 6 doz., 2/9; 12 doz., 2/6
1½ " 3/6 " ; 6 " 3/3; 12 " 3/-
3 " 5/- " ; 6 " 4/9; 12 " 4/6
Chemist's own name on per gross lots.

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SCREW-STOPPERED,

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WHITE RUBBER FITTINGS.

EACH BOTTLE IN PAPER BAG.

30s. per gross

NET CASH, LONDON,

In Quantities of One Gross & upwards.

BREFFITS'

(LIMITED),

83 UPPER THAMES STREET, LONDON.

R. H. BARRETT,

Flint Glass Bottle Works,

THE OVAL, CAMBRIDGE HEATH, LONDON, E.

For Beauty, Cheapness, and Efficiency R. H. BARRETT'S

WATCH SMELLING-SALT BOTTLES

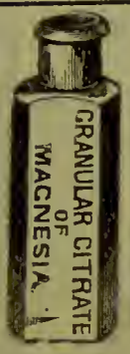
EXCEL ALL OTHERS IN THE MARKET.

The Caps are all fitted with **INDESTRUCTIBLE WASHERS**, to resist the action of Ammonia and retain the strength of the Salts.

Price, assorted white and coloured, **10/6** per gross (in 5-gross lots).

Chemists' and Perfumers' Bottles in great variety, Plain or Stoppered

Telegraphic Address—"FOREFRONT LONDON." [1]



GLASS BOTTLES OF THE BEST QUALITY.

DISPENSING, PICKLE, SAUCE, OIL, MINERAL WATERS, &c., &c.

SAMPLES AND PRICES ON APPLICATION.

E. YOULDON,

EAST LONDON GLASS BOTTLE WAREHOUSE,

36 to 40 Great Garden Street, Whitechapel,

LONDON, E.

Registered Trade Mark.

BEST FLINT DISPENSING BOTTLES, WHITE, BLUE, OR GREEN TINT, AMBER AND ALL OTHER COLOURS.

W

Number 26866.

HAND MADE SHOP-ROUNDS. OPAL, FLINT, AND TURQUOISE BOXES. SPECIAL ATTENTION GIVEN TO PROPRIETARY BOTTLES.

Owing to the steady and continuous increase in their business, and especially the enormous influx of trade they have experienced from Home and Colonial buyers during the last two or three years, the Proprietors of the above Brand of all shaped Dispensing and other Bottles have just completed an enlargement of their Works, which are now doubled in size, and capable of turning out very large quantities of Bottles at shortest notice.

The "W" Brand productions can be obtained only through Wholesale London Houses.

GLASS BOTTLES

GOOD AND CHEAP.

From Stock in London or direct from the Works.

THE NEW SHAPE FLATS, WITH ROUNDED EDGES, OR THE ORDINARY SHAPE.

3 & 4 oz.	Plain or	7s. 9d. per Gross.
6 & 8 oz.	Graduated	8s. 9d. ,,

White Phials at very low prices. Panel Bottles and all other kinds.
Mineral Water Bottles, Plain and Stoppered, at lowest market prices.
The "National Feeders," ready fitted, 2/6 per doz. (First-class Bottles).
The "Reliance Medicine Dropper" (fits any bottle), 2/- per doz.
The "Anti-Medicine Taster," for taking disagreeable Medicine, 4/- per doz., each in a separate box.

COUNTRY ORDERS RECEIVE PROMPT ATTENTION.

I. ISAACS & CO., Glass Bottle Manufacturers,
25 Francis St., Tottenham Court Rd., LONDON.
Established 60 Years. Bankers—London and Westminster Bank.
52

S. G. CLEMENTS & CO.

12, 13, and 14 LEWIN'S MEAD, BRISTOL,

WHOLESALE DRUGGISTS,

DRUG AND SPICE GRINDERS.

Special prices quoted for Ground Spices, Drugs, Crushed Linseed, &c., on application.

Manufacturers of Extract of Annatto (Aqueous), Annatto in Cake, Butter-colouring, Prime Rennet, offered in bottle, or special prices bulk.

MAW'S

EARTHENWARE INHALERS

For Hot Water, Infusions, &c.

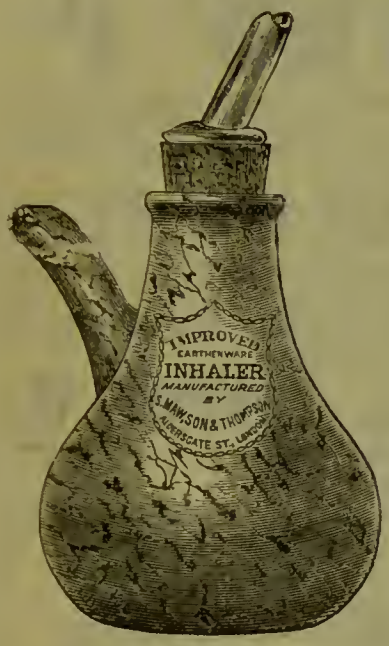


FIG. 127.
MAW'S IMPROVED.

FIG. 129.
MAW'S DOUBLE-VALVED.

FIG. 128.
MAW'S IMPROVED.

Fig. 129.—Double-Valved, 60/- per dozen; with Elastic Tubes, 78/-
Fig. 127.—Marbled, 32/ per dozen. Fig. 128.—White, 21/- per dozen.
Fig. 128.—White, half size, 13/- per dozen.

ELASTIC TUBES, with Mouthpieces, to fit Fig. 8 and 8a, 7 inches long, 8/- per dozen; 9 inches long, 12/- per dozen.

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

MANUFACTURED BY

S. MAW, SON & THOMPSON, LONDON.

WINTER NECESSITIES.

Chemists may rely upon getting the very best quality goods, by ordering Chest Protectors and Respirators from

F. NEWBERY & SONS, 1 & 3 KING EDWARD STREET, LONDON, E.C.

CHEST PROTECTORS.

	No. 1	2	3	4	5	6
Scarlet Felt Single	6/	8/	9 6	11 6	15 6	24 6
Scarlet Felt Double	14/	18 6	22 6	28/	36/	44/
Vest shape, to button in front	18/	24/	30/	36/	42/	55/
Natural Grey or Fur-Felt Single	6/6	9/6	12/	15/6	20/	25/6
Natural Grey or Fur-Felt Double	15/	20/	25/6	31/	42/	51/6

RESPIRATORS.

	Per doz.
1/ Cork	7/
1/ Metallic	7/6
1/6 "	10/
2/ "	14/
2/6 "	17/
3/6 "	27/
5/ "	36/
6/ "	45/

With "Beaulette."

PATENT "BEAULETTES" TRADE MARK.

Under the title of "BEAULETTE" this ingenious little article has been invented to enable small manufacturers of perfumes and other similar preparations to finish their goods in equal style to those who employ skilled hands for the purpose. The illustration shows fully its advantages, and the cost being very trifling, it need hardly be pointed out that the general appearance of the goods and

THE WINDOWS IN WHICH THEY ARE DISPLAYED

are very much improved by its use.

DIRECTIONS.—Hold the "BEAULETTE" flat against the neck of the bottle in a line with the *centre of the label* with the left hand, then loop the elastic ring over the stopper or cork with the right.

PRICE 4/- PER GROSS. SOLD BY ALL THE LEADING WHOLESALE HOUSES.

Suitable alike for Sprinkler Bottles or Paper Caps.

BREIDENBACH & CO., 48 Greek Street, Soho Square, LONDON, W.

THE SOLE PREVENTATIVE AGAINST

INFLUENZA is QUININE,

AND THE PUREST AND BEST FORM IN WHICH TO TAKE IT IS

STOWER'S QUINO-LEMO,

Which is made from Howards' Best Quinine, the finest selected Messina Lemons, and the purest Refined Lump Sugar.

Retail Price (including Government Stamp), 1/1½ per Bottle of 14 Doses; 2/9 per Bottle of 40 Doses; and 4/6 per Bottle of 80 Doses.

N.B.—The Proprietors, **A. RIDDLE & CO., 36 & 38 COMMERCIAL STREET, LONDON, E.,** will pay the Patent Medicine Licence for Chemists who will take a fixed quantity.

"SPECIALITIES" OF WIDE REPUTATION

Suitably Packed for Home and Export, in various Languages, for all Markets.

'COAGULINE' The Cement for all Broken Articles.

LINSEED, Chloro.-Linseed and Throat Lozenges, Jujubes, &c.

CUE CEMENT, Cue Tips, Wafers, FIXERS, CHALKS, &c.

'LAVA,' A fusible imperishable CEMENT. Patent Glass Tubes, Valve for Feeding Bottles.

ABSORBENT COTTON WOOL.

COMPOUND ESSENCE OF LINSEED, FOR COUGHS AND COLDS.

OXYMEL SCILLÆ (exceptionally brilliant) Doc. Senega Cones

PHOSPHOSACCHARITE.

GLYCERLINE. Linum Glycerinum.

'SAPO-LINI' LINSEED SOAP, IN "BROWN WINDSOR," AND "ROSOTTO."

CHESHIRE BIRDLIME.

EMOLLIENT For Chapped Hands, &c.

ELASTIC STOCKINGS, KNEE CAPS, SOCKS, ETC.

GUN COVER and CARRIER.

CHEMICAL Disinfectant

TIC PILLS, LINUM CATHARTICUM PILLS, Aspinall's PILLS, &c.

'THERMONE' HEAT RADIATOR.

Prices, Circulars with Name and Address, Specimens, Show Cards, Glass Tablets, &c., &c., on application.

KAY BROTHERS LIMITED, Laboratory and Works, ST. PETERSGATE MILLS, **STOCKPORT,** Founded A.D. 1786. Incorporated 1887.

GLASS BOTTLES.

TO WHOLESALE AND EXPORT BUYERS.

DISPENSING BOTTLES of best quality, in White Flint or all the best and newest tints. **VIALS.**—White Flint or Coloured, in all shapes and sizes. **FEEDING BOTTLES.**—Plain mouths or Screw Stoppers, in White or Green Flint. **LIME CREAMS AND KALIS** of all sizes. **ESSENCE BOTTLES** of every description, Plain or Stoppered. **MALT EXTRACT BOTTLES,** in Actinic Green, Amber, Dark Blue, or White Flint.

TO FOREIGN AND COLONIAL BUYERS.

Having recently erected spacious Warehouses, we are enabled to give special attention to packing Goods for Export. Only experienced Packers employed.

E. A. HEARN & CO., WHOLESALE & EXPORT GLASS BOTTLE MANUFACTURERS, ECLIPSE GLASS WORKS, CHATSWORTH ROAD, CLAPTON, **LONDON, E.**

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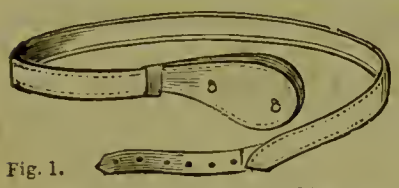

Fig. 1.

TRUSSES.

Fig. 2.

The Best and Cheapest Trusses of all kinds in the Wholesale and Export Market are manufactured by

LINDSEY & SONS.

ELASTIC STOCKINGS, SUSPENDERS, AND SURGICAL BANDAGES OF ALL KINDS.

WHOLESALE AND EXPORT. THE LARGEST SHIPPERS IN THE TRADE.

ILLUSTRATED PRICE LIST POST FREE TO ANY ADDRESS.

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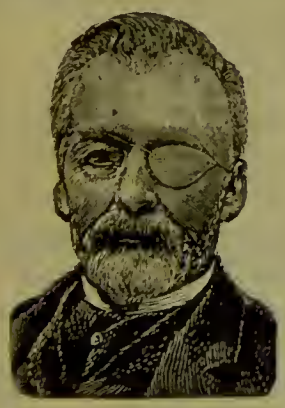
PERFECTION EYE PRESERVERS & READING SHADES

(Registered).



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XYLONITE EYE CAPS
(*Concave*). *Rights and Lefts.*
Flesh Coloured.
Stop out the Light and Cold without Touching the Eye.

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Trade Mark.

Registered.

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Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.
HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Tubes two-thirds full, 1s. 8d. each; Tubes one-third full and Lancet-charged points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged Small Points, 5s. Tubes two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccine Ejectors, 1s. 3d. each, including postage. Vaccinations by appointment. P.O.O.s (including postage, and crossed London and Westminster Bank) with orders, payable to EDWARD DARKE, *Secretary.*
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WORLD-KNOWN

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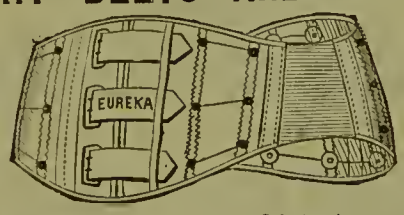
The "EUREKA" Galvano-Electric Continuous

BATTERY BELTS AND CORSETS.

BEWARE OF FRAUDS.



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Narrow Belts, Featherweight Electric .. .. 30/- per doz.
Galvano-Electric Corsets, 4/6 to 25/6 each, according to power.
Medical Batteries, Coils, Bells, &c.

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£15 per ton, 17s. per cwt., 9s. per 56 lbs., in bags;
27s. for 36 2-lb. Tins; carriage paid within 200 miles.
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PURVEYORS TO HER MAJESTY,
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Generates and retains a natural heat in the body and imparts full vital action to the nerves and muscles.
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VAN HARGAN'S.
The Best Tonic Stimulant after
INFLUENZA.
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BALM OF BETHESDA
CURES
TENDER FEET,
Relieves Hot, Tender, Chafed, or Swollen Feet, softens Hard Blisters, renders the Feet pliant and elastic. Thousands of Testimonials.
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MONA BOUQUET.
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GREENSILL & SON, DOUGLAS.
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☞ 40-GALLON CASKS AT SPECIAL RATES.
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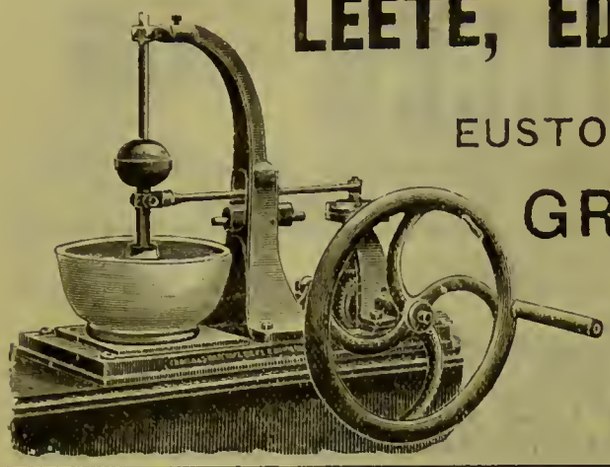

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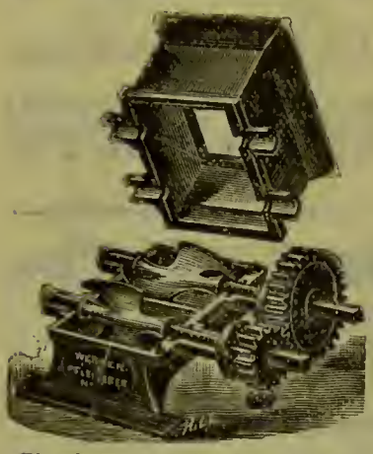

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